

STATE DOCUMENTS COLLECTION

APR 24 1991

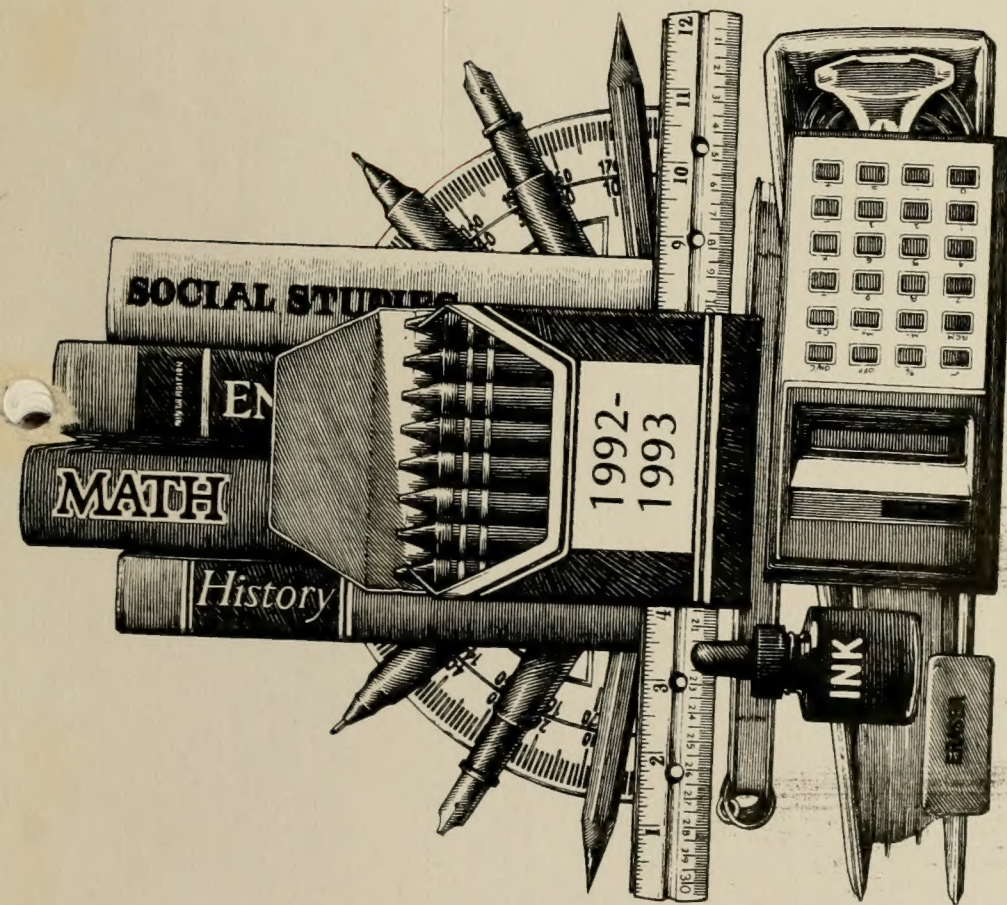
MONTANA STATE LIBRARY  
1515 E. 6th AVE.  
HELENA, MONTANA 59620

JUL 10 1991

MONTANA STATE LIBRARY  
S 353 G1eban 1991 c.1 v.3  
Governor's executive budget agency narra



3 0864 00072351 3



BUDGET REQUEST  
Office of Public Instruction  
Nancy Keenan, Superintendent

PLEASE RETURN

10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100



OFFICE OF PUBLIC INSTRUCTION  
NARRATIVE BUDGET JUSTIFICATION

TABLE OF CONTENTS

	<u>Page</u>
Agency Summary . . . . .	2
Organization Chart . . . . .	4
Summary of Modified Funding Requests . . . . .	5
State Superintendent's Office Program . . . . .	10
Elected Official . . . . .	11
Superintendent's Office . . . . .	12
Central Services Program . . . . .	16
Administrative Services . . . . .	17
Publications . . . . .	25
HB28 and HB16 . . . . .	26
Educational Services Program . . . . .	29
Curriculum Assistance . . . . .	30
Chapter I/Migrant Administration . . . . .	33
Special Ed Administration . . . . .	35
Vocational Education - JTPA . . . . .	38
Title IV . . . . .	43
Other Educational Services . . . . .	47
Motorcycle Safety . . . . .	57
Distribution to Schools Program . . . . .	59
State and County Equalization . . . . .	60
State Traffic Education . . . . .	63
Distributions to Public Schools . . . . .	64



# OFFICE OF PUBLIC INSTRUCTION

T3501

Full Time Equivalent Employees	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
	127.73	129.58	127.73	6.00	133.73	127.73	6.00	133.73
Personal Services	3,732,175.45	4,054,076	4,147,509	184,570	4,332,079	4,140,913	184,148	4,325,061
Operating Expenses	2,332,117.06	2,419,986	2,515,647	676,156	3,191,803	2,505,095	722,499	3,227,594
Equipment	308,447.27	57,872	83,352	77,014	160,366	83,352	33,346	116,698
Local Assistance	303,967,033.46	393,168,937	418,668,937	18,297,000	436,965,937	418,668,937	17,825,000	436,493,937
Grants	5,436,688.38	4,132,782	4,132,782	430,800	4,563,582	4,132,782	436,800	4,569,582
Transfers	360,000.00	490,641	420,195	4,854	425,049	420,195	6,031	426,226
<b>Total Agency Costs</b>	<b>\$316,136,461.62</b>	<b>\$404,324,294</b>	<b>\$429,968,422</b>	<b>\$19,670,394</b>	<b>\$449,638,816</b>	<b>\$429,951,274</b>	<b>\$19,207,824</b>	<b>\$449,159,098</b>
General Fund	45,056,327.94	44,969,980	45,158,774	112,812,561	157,971,335	45,135,215	128,312,959	173,448,174
State Special Revenue Fund	263,532,664.08	351,576,475	377,071,039	-94,345,500	282,725,539	-130,300,426	266,720,817	
Federal Special Revenue Fund	6,771,386.94	6,899,453	6,894,245	1,203,333	8,097,578	6,896,767	1,245,333	8,142,100
Proprietary Fund	776,082.66	878,386	844,364	0	844,364	848,007	0	848,007
<b>Total Funding Costs</b>	<b>\$316,136,461.62</b>	<b>\$404,324,294</b>	<b>\$429,968,422</b>	<b>\$19,670,394</b>	<b>\$449,638,816</b>	<b>\$429,951,274</b>	<b>\$19,207,824</b>	<b>\$449,159,098</b>
State Superintendent's Office	709,599.64	376,639	692,110	28,931	721,041	692,296	29,106	721,402
Central Services	2,085,494.20	2,362,109	2,278,015	17,215	2,295,230	2,257,041	-13,961	2,243,080
Educational Services	3,949,584.23	4,261,811	4,196,578	1,327,248	5,523,826	4,200,218	1,367,679	5,567,897
Distribution To Public Schools	309,391,783.55	397,323,735	422,801,719	18,297,000	441,098,719	422,801,719	17,825,000	440,626,719
<b>Total Program Costs</b>	<b>\$316,136,461.62</b>	<b>\$404,324,294</b>	<b>\$429,968,422</b>	<b>\$19,670,394</b>	<b>\$449,638,816</b>	<b>\$429,951,274</b>	<b>\$19,207,824</b>	<b>\$449,159,098</b>

## Mission and General Description

It is the mission of the Office of Public Instruction to advocate, communicate, educate, and be accountable to those we serve.

The office provides services to Montana's school-age children and to over 9,500 teachers in 538 school districts. The staff provides technical assistance in planning, implementing and evaluating educational programs in such areas as teacher preparation, teacher certification, school accreditation, school curriculum and telecommunications, school finance, and school law. The staff administers a number of federally funded programs and provides a variety of informational services.

The Chief State School Officer provides leadership, direction, training and coordination of services to a variety of school and public groups. The staff provides assistance to the Superintendent of Public Instruction in performing prescribed duties requiring the Superintendent's personal attention or representation.

The Educational Services Program provides curriculum development, information, education, evaluation and planning support to school districts throughout Montana. Additionally this program assists school staff directly through site consultation, research, needs assessment, material development and inservice education. This staff also prepares recommendations for school accreditation and operates a teacher certification program.



The Centralized Services Program provides data processing, financial and administrative support for educational programs available in Montana's schools at the elementary and secondary levels. Staff members manage state and federal financial resources for schools, and based on a thorough review of district financial and enrollment reports, distribute over \$440,000,000 in appropriated and non-appropriated state and federal funds to 538 districts on an annual basis.

The Office of Public Instruction has a staff of less than 128 FTE comprised of curriculum specialists, accreditation specialists, accountants, data processing managers and general administrative personnel. The FY91 appropriation for the Superintendent's office is in excess of \$400,000,000. The office is directly responsible for the distribution and management of state equalization aid, guaranteed tax base support, special education funding, transportation, and an additional 40+ federal and state earmarked programs/grants, several of which require unique reporting from each of the 538 school districts in the state of Montana.

The Superintendent also serves as a member of the State Board of Education, the Board of Public Education, the Board of Regents, the Board of Land Commissioners, and the Teacher's Retirement Board. The Office of Public Instruction is responsible for several major school programs including: special education, financial aid to school districts, gifted and talented programs, curriculum assistance to Montana's 9,500+ teachers, school accreditation, teacher certification, Chapter 1, K-12 vocational education, school foods, transportation, and traffic safety. The Superintendent also serves as an advocate for education throughout the state of Montana. Additionally the office annually provides ongoing training to new district personnel. A significant number of school district staff turn over on an annual basis.

During the 1990 special session, HB28 was passed which dramatically increased the financial management responsibilities of the office.

## Agency Organization

The Office of Public Instruction is organized into three

OFFICE OF PUBLIC INSTRUCTION

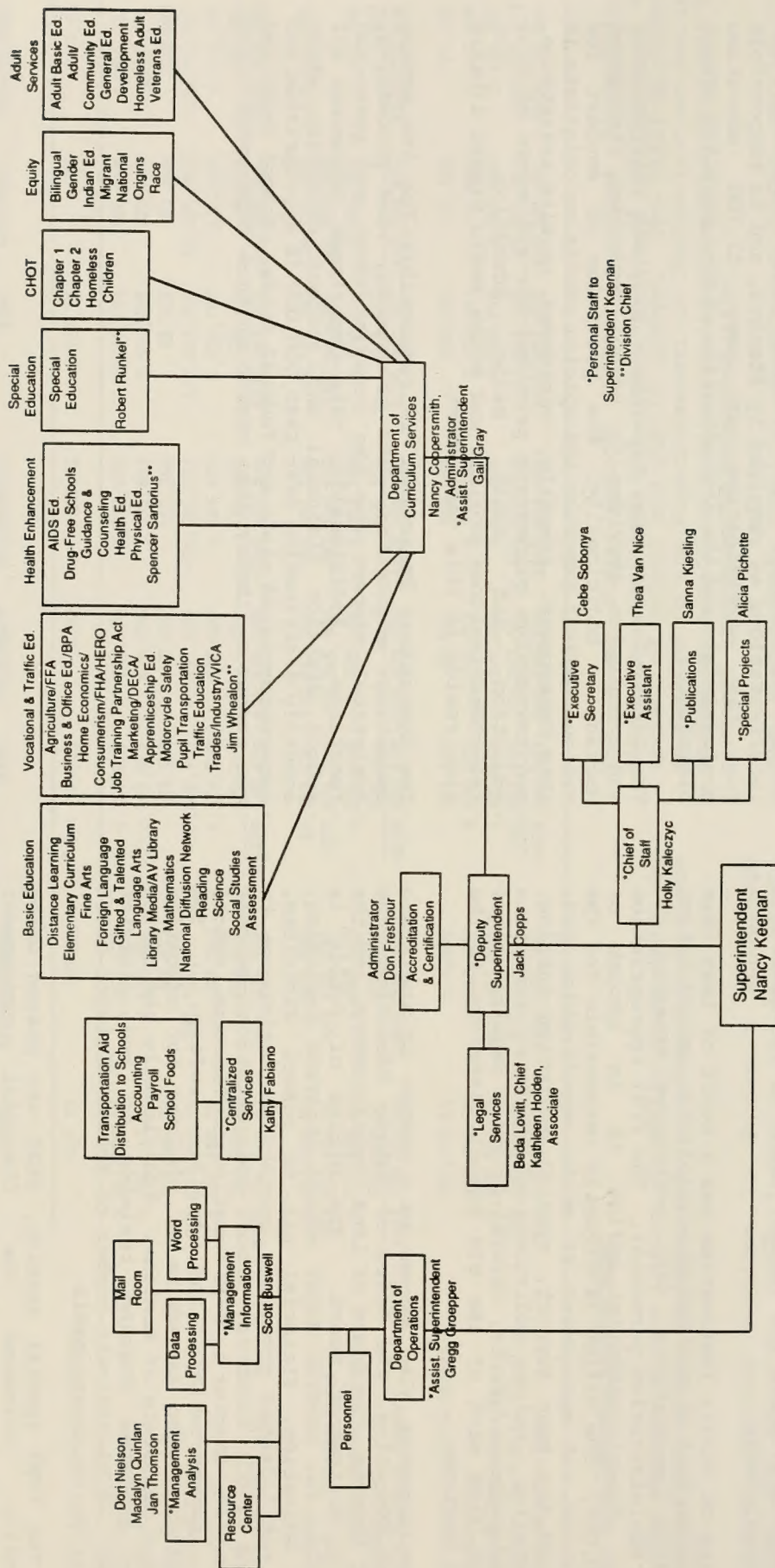
functional areas: the Superintendent's Office, Curriculum Services and Operations.

The Superintendent's Office responsibilities include personal staff, the Deputy Superintendent, legal services, certification and accreditation and personal/clerical staff to support those functions. This area sets education policy, interprets law, issues legal decisions and interpretations as required by statute, and is responsible for the certification of over 12,700 education professionals and the accreditation of Montana's 538 school districts.

The Curriculum Services Department provides instructional and curriculum services to school personnel throughout Montana. Additionally, the provision of support for various Federal programs and special education originate in this department. Annually, workshops, on site assistance, and curriculum guides are provided for all areas of K-12 education and adult basic education. The telecommunications project and state audio visual library also reside in this department.

The Operations Department is responsible for the agency budgeting, accounting, data processing, word processing, analytical support for the Superintendent and personnel functions. Additionally, this department processes all school district financial and student reporting while annually distributing over \$440,000,000 in appropriated and non-appropriated state and federal funds. School foods and the resource library also reside in this department.







## Summary of Modified Funding Requests

In January of 1990 the Office of Public Instruction proposed several modifications to the FY92-93 budget. The most significant proposal was an inflationary adjustment to the foundation program of approximately \$19.5M in FY92 and \$40.3M in FY93.

**I. Modifications Included in the Executive Budget**  
Of the modifications requested, the following are included in the Governor's Executive Budget. Detailed justifications for these modifications are provided in this document.

### FY92-93 Biennium APPROPRIATION

<u>Federal Special Revenue Fund</u>		<u>Page</u>
AIDS Education	\$198,000 (1.5 FTE)	54
Bilingual grant	50,000 (0.5 FTE)	54
Drug Free Schools	264,980 (2.0 FTE)	54
Race Equity	50,000	44
EHA-B Administration	642,000	36
Chapter 1		
Administration	100,000	34
Chapter 1 Program		
Improvement	180,000	70
Migrant grants	640,000	34
ESEA Chapter 2	283,686	32
National Origins	- 0 - (0.5 FTE)	45
NET grant	25,000	54
School Foods	- 0 - (0.5 FTE)	53
Bicentennial Competition	15,000	53
<u>State Special Revenue Fund</u>		
Cooperative Food		
Purchase	\$26,032	53
<u>General Fund</u>		
Audiology	\$136,000	52
Fee Assessments - Confs.	61,000	22
At Risk Child		
Intervention	80,000 (1.0 FTE)	52

## II. Agency Modifications

The following requested budget modifications were not approved in the Executive Budget but are presented here for the Legislature's consideration and are in the Legislative Fiscal Analyst's Biennium Budget Analysis Report. Detailed justifications for these modifications are provided in the accompanying program narratives.

### PROGRAM 01 - SUPERINTENDENT'S OFFICE

**Accreditation** - In order to comply with the new accreditation standards, which will be phased in over the period 1989-2001, schools must establish curriculum and assessment development processes for each curriculum area. The Office of Public Instruction is working hard to provide written material and workshops in nine different program areas for over 800 schools currently operating in Montana. However, the current staff of two are unable to provide the level of assistance required for this task.

The existing staff is responsible for 1) the annual desk review of school reports to ensure schools are in compliance with existing standards and 2) on-site visits for schools placed under accreditation advisement. This heavy workload prevents the existing accreditation staff from providing on-site accreditation visits to all schools as required under the standards.

The additional staff would travel throughout the state assisting schools in designing curriculum and assessment procedures. Through regional workshops and on-site visits, the specialist would help schools comply with the new standards with the least cost and most benefit to students.

Funds requested are for a grade 16 curriculum and assessment specialist and related operating expenses.

FTE	<u>FY92</u>	<u>FY93</u>
General Fund	1.00	1.00
	\$56,322	\$53,122



PROGRAM 05 - CENTRAL SERVICES

Indicator System - This proposal would provide three staff and related expenses to establish a state education indicators system and to compile and analyze existing district, secondary vocational education, adult education, GED, curriculum accreditation, assessment and certification information resident within the Office of Public Instruction. Regular records maintenance staff support (1.0 FTE) would be necessary to compile and maintain the data throughout the year. Staff would work with appropriate agencies and local districts to develop an education data base compatible with long-term follow up. Included in the development considerations would be the possibility of implementing a follow-up system on students who leave the education system in conjunction with employment, income tax, welfare, and census data.

Federal funds available for this purpose come from the National Center for Education Statistics.

	<u>FY92</u>	<u>FY93</u>
FTE	3.00	3.00
General Fund	\$117,647	\$88,848
Federal Special Revenue	\$ 15,000	\$15,000

PROGRAM 06 - EDUCATIONAL SERVICES

Gender Equity - As a result of Ridgeway vs. Montana High School Association, et al, OPI is under federal court order to perform certain activities related to gender equity each year in all school districts in Montana.

Federal funds have been cut gradually over the last several years so that none of these court-ordered activities have been funded. In order to avoid litigation and other court requirements against Montana and OPI, state funding is necessary to meet the court mandate. These funds will be used to pay the salary, benefits and operating expenses associated with hiring a .50 administrative assistant, and to pay the cost of conducting an annual court-ordered conference for approximately 100 school administrators and teachers.

OFFICE OF PUBLIC INSTRUCTION

	<u>FY92</u>	<u>FY93</u>
FTE	0.50	0.50
General Fund	\$27,588	\$27,588

Special Education Staffing - This request is for 2.00 FTE for administration of \$34 million in state funds and \$5 million in federal funds for special education. Current level staff for Special Education is 11.15 FTE.

The Director of Special Education is currently serving as the Budget Officer. The distribution of over \$34 million in state funds is based on an individual review of each budget application. This review includes assessment of staff and program expansion at the district level.

The Education of the Handicapped Act has resulted in expansion of the responsibilities of the Special Education unit making it difficult to keep up with the other duties assigned to the unit.

	<u>FY92</u>	<u>FY93</u>
FTE	2.00	2.00
General Fund	\$67,751	\$60,551

At-Risk Students - The Office of Public Instruction can expand the "at risk" programs throughout the state through a program offering demonstration projects, training and conferences. Montana's rural schools lack access to programs and services that assist in dealing with at-risk students. National studies show that students who drop out of high school cost society more--both in increased welfare and social service costs and in lost human potential. For each \$1 spent on "at risk" programs, \$7 to \$12 could be saved in social service and custodial costs.

	<u>FY92</u>	<u>FY93</u>
General Fund	\$33,059	\$33,059

PROGRAM 09 - DISTRIBUTIONS TO SCHOOLS

Foundation Program Schedule Inflation - In compliance with Supreme Court decision, the 1989 Legislature accepted state responsibility to adequately fund K-12 education. To



maintain the legislated level of equalization will require 4.66% annual inflationary increases in the foundation schedules. If inflationary factors are not considered, the level of current state equalization will be eroded.

	<u>FY92</u>	<u>FY93</u>
State Special Revenue	\$16,000,000	\$33,000,000

Guaranteed Tax Base Subsidy Inflation - The 1989 Legislature provided for guaranteed tax base (GTB) aid for the general fund and retirement fund to districts with below average taxable valuation per ANB. The amount of money provided was considered in calculating an acceptable level of equalization aid to districts. To maintain the legislated level of equalization aid will require 4.66% annual inflationary increases. Without an inflationary adjustment to this funding source, the level of equalization support will erode below levels approved by the 1989 Legislature. GTB aid for FY91 for both the general fund and the retirement fund is \$44.5 million.

	<u>FY92</u>	<u>FY93</u>
State Special Revenue	\$2,073,700	\$4,244,034

Special Education Allowable Cost Inflation - State funding for special education allowable costs is a component of the state equalization of K-12 education costs. The 1989 Legislature increased the state's responsibility to adequately fund special education costs. To maintain the legislated level of equalization will require 4.66% annual inflationary increases. If inflationary factors are not considered, the level of current state equalization will be eroded.

	<u>FY92</u>	<u>FY93</u>
General Fund	\$1,500,000	\$3,100,000

Gifted and Talented Education Equalization - The current \$100,000 for gifted and talented start-up programs is the only state money available to districts for gifted and talented programs. This program would provide additional funds for gifted education programs at an amount which is the average of the appropriations for gifted and talented

education in the surrounding states.

	<u>FY92</u>	<u>FY93</u>
FTE	1.00	1.00
General Fund	\$ 43,971	\$ 43,972
State Special Revenue	\$751,600	\$748,400

### III. Other Issues

In addition to the above modified proposals, the Office of Public Instruction has several critical funding needs we were unable to address through the Governor's budget process. For example, the budget process did not allow for data processing increases due to conversion to the state IBM computer environment. The old computer system was a stand alone Honeywell system.

Under previous executive budget processes, agencies were allowed to propose increases/decreases to their base. This allowed for projects which did not fit within the parameters of the modified budget proposal, but were essential to the completion of the agency's statutory responsibilities. A summary of those proposals is listed below. A more detailed justification of each proposal is provided in the accompanying narrative for each program. With the exception of the single building proposal, the following projects are on-going responsibilities which are not being met, were not addressed in the budget process during the last legislative session, and are necessary to fulfill Constitutional or statutory responsibilities.

### PROGRAM 05 - CENTRAL SERVICES

Financial management and data processing staffing - The office requests 13 FTE to comply with the administrative and financial requirements of state law both within the Office of Public Instruction and at the district level.

The Office's Operations Department requests continuation of a grade 14 accountant and related operating expenses currently authorized under HB16 to provide ongoing training to district clerks and county superintendents in the proper application of generally accepted accounting principles (GAAP); to review school district reports for compliance with GAAP; and to review and follow up on districts' audit reports in accordance with federal single audit



requirements.

The Operations Department requests a grade 15 Administrative Officer, a grade 14 Administrative Officer and a grade 9 Administrative Assistant to assist in the distribution of and accountability for monthly foundation and Guaranteed Tax Base payments and transportation payments; to review school district reports for compliance with statutory guaranteed tax base, reserve and levy limitations; and to respond to ever increasing requests for information and training in the preparation of school district budgets and reports necessary to calculate state aid entitlements.

Two Grade 14 Budget Officers are requested to aid in the preparation, monitoring and amending of this office's budget, which is one of the largest in state government, and to ensure compliance with appropriation and budget amendment requirements set forth in statute, the appropriation bill boilerplate and in State policy.

Two grade 15 programmers, two grade 12 support staff and three grade 5 data entry staff are requested to develop and/or rewrite the computer systems for school transportation, telecommunications and accreditation.

	<u>FY92</u>	<u>FY93</u>
FTE	13.00	13.00
General Fund	\$469,331	\$402,223
Proprietary Fund	\$ 72,300	\$60,270

Single Building - The Office of Public Instruction proposes to lease, or construct at a cost of approximately \$5,000,000, a 45,000 square foot building to house all OPI operations in a central location. The Office is presently housed in five buildings, plus one storage building, resulting in numerous inefficiencies and duplication which can be corrected by a new building. First year costs include moving expenses.

	<u>FY92</u>	<u>FY93</u>
General Fund		
Rent/Janitorial	\$235,600	\$180,300

Resource Center Fund Balance - This budget modification would allow the Office of Public Instruction to spend accumulated revenues for the purpose of upgrading telecommunications equipment and documents in the Resource Center to improve services provided to staff and school districts. The Resource Center is partially funded from fees charged for documents and on-line searches. The fees received are deposited in a State Special Revenue account. Revenues received have exceeded expenditures incurred for a number of years and a balance of \$8,000 has accumulated.

	<u>FY92</u>	<u>FY93</u>
State Special		
Revenue Fund	\$8,000	\$0

#### PROGRAM 06 - EDUCATIONAL SERVICES

State Funded Full-Time American Indian Education Specialist Montana has made a commitment to American Indian education (Article X, Section 1 (2), Montana Constitution). This budget modification would provide full-time state funding for the salary and operating expenses for an American Indian education specialist, with an additional 0.5 FTE to utilize federal funding for support staff.

	<u>FY92</u>	<u>FY93</u>
FTE	0.50	0.50
General Fund	\$ 24,071	\$23,997

Curriculum Specialists The Office of Public Instruction has statutory responsibilities for providing curriculum assistance and review of the accreditation status of school districts (20-7-102 MCA, 20-7-113 MCA, and 20-7-114 MCA.) This budget modification would fully fund curriculum specialists out of the General Fund or the foundation program.

The Office of Public Instruction has eleven basic education curriculum specialists to provide instructional assistance, inservice training, maintain and publish curriculum guides, support the telecommunications project and perform mandatory accreditation visits. The total budget for these staff is approximately \$915,000, \$465,000 of which is paid with federal Chapter 2 money. The Chapter 2 money is



restricted for use in targeted areas.

It is unreasonable and poor public policy to have the federal dollar dictate half of our specialists' work product. If this office is to provide the critical guidance necessary for the accreditation standards, it is imperative that these positions be divorced from the federal funding mechanism by funding them from the General Fund or the foundation program.

Additionally, new accreditation standards published in March 1989 require that written sequential curricula be developed in nine program areas. OPI needs to develop sequential curricula in six of these areas during the next biennium. Publication of the curricula has not been included in base appropriations. The cost of publication and dissemination will average \$5,000 per program area for a total one-time cost of \$30,000.

	<u>FY92</u>	<u>FY93</u>
General Fund OR State		
Special Revenue Fund	\$480,367	\$482,101

## STATE SUPERINTENDENT'S OFFICE PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993		Recommended	Base	Incr/Decr	Recommended	Base	Incr/Decr	Recommended
			Base	Incr/Decr	Base	Incr/Decr							
Full Time Equivalent Employees	16.00	6.00	16.00	.00	16.00	.00	16.00	16.00	.00	16.00	16.00	.00	16.00
Personal Services	575,576.49	262,753	580,819	1,226	582,045	1,221	580,828	579,607	1,221	580,828	579,607	1,221	580,828
Operating Expenses	126,127.15	113,886	109,300	29,696	138,996	29,876	140,574	110,698	29,876	140,574	110,698	29,876	140,574
Equipment	7,896.00	0	1,991	-1,991	0	-1,991	0	1,991	-1,991	0	1,991	-1,991	0
Total Agency Costs	\$709,599.64	\$376,639	\$692,110	\$28,931	\$721,041	\$29,106	\$721,402	\$692,296	\$29,106	\$721,402	\$692,296	\$29,106	\$721,402
General Fund	677,937.64	376,639	657,498	28,931	686,429	29,106	686,871	657,765	29,106	686,871	657,765	29,106	686,871
Federal Special Revenue Fund	31,662.00	0	34,612	0	34,612	0	34,531	34,531	0	34,531	34,531	0	34,531
Total Funding Costs	\$709,599.64	\$376,639	\$692,110	\$28,931	\$721,041	\$29,106	\$721,402	\$692,296	\$29,106	\$721,402	\$692,296	\$29,106	\$721,402

## Overview

The State Superintendent Program provides leadership, direction, and coordination services to the Office of Public Instruction and to a variety of school and public groups. The staff provides assistance to the Superintendent of Public Instruction in performing prescribed duties requiring the Superintendent's personal attention or representation.

Reorganization - FY91 data in the above table is not comparable to the FY92 and FY93 base budget.

The base FY92 and FY93 FTE and budget reflect a planned reorganization of legal and certification/accreditation staff (10 FTE) and their related operating expenses from other programs to this program, but the appropriated FY91 column does not. Our workload did not permit us to prepare the budget, SBAS and payroll forms necessary to complete the reorganization prior to preparing our 1992-93 budget request.

Actual FY90 FTE and expenditures shown above have been restated as though the reorganization occurred in that year, thus FY90 data is comparable to the base budget for FY92 and FY93.



# ELECTED OFFICIAL

35010101.980

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	1.00	1.00	1.00	.00	1.00	1.00	.00	1.00
Personal Services	0.00	50,359	50,336	0	50,336	50,161	0	50,161
Total Agency Costs	\$0.00	\$50,359	\$50,336	\$0	\$50,336	\$50,161	\$0	\$50,161
General Fund	0.00	50,359	50,336	0	50,336	50,161	0	50,161
Total Funding Costs	\$0.00	\$50,359	\$50,336	\$0	\$50,336	\$50,161	\$0	\$50,161

## Overview

This activity includes only the salary of the elected State Superintendent of Public Instruction.

## Goals

This activity fulfills the constitutional requirement which provides for an elected Superintendent of Public Instruction.

## Authorization

Federal/State  
Statute or Regulation Title and Description  
Article VI, Section I Montana constitution; authorizes an elected Superintendent of Public Instruction

## Base Program

Program includes only the Superintendent's salary.

## Base Funding

Constitutionally required official.

## Performance Indicators

Constitutionally required official.

Workload Measures FY90 ACTUAL FY91 ENACTED FY92 BASE FY93 BASE

Not Applicable.

## Increase or Decrease From Base

None.



	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr	Base	Incr/Decr
				Recommended		Recommended
Full Time Equivalent Employees	15.00	5.00	15.00	.00	15.00	.00
Personal Services	575,576.49	212,394	530,483	1,226	529,446	1,221
Operating Expenses	126,127.15	113,886	109,300	29,696	110,698	29,876
Equipment	7,896.00	0	1,991	-1,991	1,991	-1,991
Total Agency Costs	\$709,599.64	\$326,280	\$641,774	\$28,931	\$642,135	\$29,106
General Fund	677,937.64	326,280	607,162	28,931	607,604	29,106
Federal Special Revenue Fund	31,662.00	0	34,612	0	34,531	0
Total Funding Costs	\$709,599.64	\$326,280	\$641,774	\$28,931	\$642,135	\$29,106

## Overview

The Superintendent of Public Instruction is an elected official mandated by Section 1, Article 6 of the Montana Constitution.

Section 20-3-106, MCA, states that the Superintendent "... has the general supervision of the public schools and districts of the state." Section 20-7-301, MCA, names the Superintendent as "the governing agent and executive officer" for K-12 vocational education in Montana.

The office provides services to over 150,000 Montana school-age children and to over 9,500 teachers in 538 school districts. The staff provides technical assistance in planning, implementing and evaluating educational programs in such areas as teacher preparation, teacher certification, school accreditation, school curriculum, school finance and school law. The staff administers a number of federally funded programs and provides a variety of informational services.

## Goals

The mission of the office is to advocate, communicate, educate, and be accountable to those we serve. The Chief State School Officer provides leadership, direction and

coordination of services to a variety of school and public groups. The staff provides assistance to the Superintendent of Public Instruction in performing prescribed duties requiring the Superintendent's personal attention or representation, including assisting her duties as a member of the Board of Education, the state Board of Public Education, a member of the state Board of Regents, the state Land Board, and the Teacher's Retirement Board. Major programs operated by the Office of Public Instruction include special education, monitoring and direct aid to school districts, gifted and talented programs, curriculum assistance for Montana's teachers, as well as serving as an advocate for education as the chief elected education official in the state of Montana.



## Authorization

<u>Federal/State Statute or Regulation</u>	<u>Title and Description</u>
Article VI, Section I	Montana Constitution; authorizes an elected Superintendent of Public Instruction
Article VI, Section 4, 2-18-104 M.C.A.	(5) Montana Constitution; indicates duties are as provided by law. Authorizes the Superintendent up to 15 personal staff.
Title 20 M.C.A.	General statutory provisions governing schools, establishes responsibilities of the Superintendents.
Article X, Section IV	Montana Constitution; establishes the Superintendent as a member of the Land Board.
Title 77 M.C.A.	Establishes the duties of the Land Board.
Article X, Section 9	(b) Montana Constitution; establishes the Superintendent as and ex-officio member of the Board of Education, Board of regents, Board of Public Education.
20-3-103 M.C.A.	Authorizes the Superintendent to employ a Deputy Superintendent.
20-3-104 M.C.A.	Authorizes the Superintendent to employ one or more Assistant Superintendents plus "any other supervisors or assistants to carry out the duties of his office."
20-7-101 M.C.A.	Responsibility to recommend accreditation standards.
20-7-104 M.C.A.	Responsibility to provide instructional assistance.
20-7-113 M.C.A.	Responsibility to maintain curriculum guide files and publish curriculum guides.
20-7-131 M.C.A.	Responsibility to issue secondary equivalency certificates.
20-7-201 M.C.A.	Responsibility to maintain an audio visual library.
20-7-3-1 M.C.A.	Responsibility for K-12 vocational education, including: state plan, establish standards for courses and programs, review process for establishment and deletion of programs, instructor qualifications, course criteria, apportion monies, and evaluate programs.
20-7-403 M.C.A.	Responsibility to administer special education, (14 specific tasks).
20-7-431 M.C.A.	Requirement for the Superintendent to make rules and account for special education expenditures by reviewing and approving all special education budgets.
20-7-502 M.C.A.	Requirement to develop, administer and supervise the state traffic education program, (8



	responsibilities).
20-7-604 M.C.A.	Requirement to license all textbook dealers.
20-7-712 M.C.A.	Requirement to manage adult basic education by directing the distribution of funds appropriated by the Legislature.
20-7-903 M.C.A.	Responsibility to propose rules and approve programs for gifted and talented children.
20-7-1001 M.C.A.	Responsibility to promote and encourage telecommunications in education.
20-9-102 M.C.A.	Responsibility for general supervision over the school budgeting procedures and provisions.
20-9-346 M.C.A.	Responsibility to administer distribution of state equalization aid, (6 responsibilities).
20-9-369 M.C.A.	Responsibility to administer distribution of guaranteed tax base aid.
20-9-532 M.C.A.	Responsibility to administer retirement equalization aid.
20-9-603 M.C.A.	Responsibility to request and accept any available federal monies.
20-10-103 M.C.A.	Responsibility to set certification standards for school bus drivers.
20-10-112 M.C.A.	Responsibility to administer and supervise the school transportation program (8 duties including the approval of all bus routes and transportation contracts and disbursement of funds).
20-10-201 M.C.A.	Responsibility to administer a school foods program.
20-3-106 M.C.A.	Collect and maintain a file of curriculum guides and assist schools with instructional programs.
20-3-107 M.C.A.	Controversy appeals.
20-7-101 M.C.A.	Responsibility to recommend accreditation standards.

### Base Program

Six of the fourteen positions in this activity are personal staff as authorized in 2-18-104 M.C.A. The remaining positions are an administrative assistant to the Deputy Superintendent, certification/accreditation staff, and two paralegal assistants. General responsibilities of the Superintendent include regular written and verbal

communication with 9,500+ teachers, 800+ school administrators and supervisors, 2,400+ specialized personnel and personal visits to the 538 school districts.

The legal section provides all legal services for the Office of Public Instruction. Under base funding, the legal services' 4 FTE will provide for 50 administrative appeals, 35 special education cases, 30 state and federal



district court and supreme court cases, and 3000 telephone and letter consultations with schools, superintendents, the public and agency staff.

### Base Funding

This budget is funded from the General Fund with the exception of .75 of one attorney's salary, which is funded with Federal EHA-B funds.

### Performance Indicators

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
--------------------------	--------------------	---------------------	------------------	------------------

#### Legal Services

#### Administrative

Appeals 36 40 50 60

#### Court Cases

25 30 35 40

#### Special Education

19 25 30 40

#### Workshops

2 3 3 3

### Increases to Base

#### Program Transfer

The budget increase shown in the FY92 and FY93 "incr/decr" columns of the table on page 12 was specifically allowed by the Governor's budgeting instructions. It is a transfer of base budget authority from the Central Services Program to reflect actual FY90 experience and is not an increase to the Office of Public Instruction's total budget.

#### Accreditation

In order to comply with the new accreditation standards, which will be phased in over the period 1989-2001, schools must establish curriculum and assessment development processes for each curriculum area. The Office of Public Instruction is working hard to provide written material and workshops in nine different program areas for over 800 schools currently operating in Montana. However, the current staff of two are unable to provide the level of assistance required for this task.

The existing staff is responsible for 1) the annual desk review of school reports to ensure schools are in compliance with existing standards and 2) on-site visits for schools placed under accreditation advisement. This heavy workload prevents the existing accreditation staff from providing on-site accreditation visits to all schools as required under the standards.

The additional staff would travel throughout the state assisting schools in designing curriculum and assessment procedures. Through regional workshops and on-site visits, the specialist would help schools comply with the new standards with the least cost and most benefit to students.

If schools fail to comply with the phased-in deadlines for the new accreditation standards, they face the possibility of losing state funding. Additional staff in the field in the early 1990's will help schools comply with the standards in a methodical, planned fashion, ensuring the educational opportunity for Montana school children.

Funds requested are for a grade 16 curriculum and assessment specialist and related operating expenses.

### FUNDING REQUESTED:

<u>FTE</u>	<u>FY92</u>	<u>FY93</u>
General Fund	1.00	1.00
	\$56,322	\$53,122



## CENTRAL SERVICES PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr	----- Recommended	----- Base	Fiscal 1993 Incr/Decr	----- Recommended
Full Time Equivalent Employees	34.85	41.60	34.85	.00	34.85	34.85	.00	34.85
Personal Services	973,644.13	1,212,155	1,071,308	2,452	1,073,760	1,070,308	2,448	1,072,756
Operating Expenses	575,019.18	621,244	760,408	-24,382	736,026	740,434	-29,231	711,203
Equipment	176,830.89	38,069	26,104	34,291	60,395	26,104	6,791	32,895
Transfers	360,000.00	490,641	420,195	4,854	425,049	420,195	6,031	426,226
Total Agency Costs	\$2,085,494.20	\$2,362,109	\$2,278,015	\$17,215	\$2,295,230	\$2,257,041	\$-13,961	\$2,243,080
General Fund	1,251,473.87	1,426,858	1,417,017	17,215	1,434,232	1,392,279	-13,961	1,378,318
State Special Revenue Fund	4,965.19	5,000	5,000	0	5,000	5,000	0	5,000
Federal Special Revenue Fund	52,972.48	51,865	11,634	0	11,634	11,755	0	11,755
Proprietary Fund	776,082.66	878,386	844,364	0	844,364	848,007	0	848,007
Total Funding Costs	\$2,085,494.20	\$2,362,109	\$2,278,015	\$17,215	\$2,295,230	\$2,257,041	\$-13,961	\$2,243,080

## Overview

The Central Services Program is responsible for reporting, distributing, and accounting for state and federal funds provided to school districts. The program provides data processing, word processing, purchasing, payroll, personnel, mail, analytical, and accounting support to operations within the Office of Public Instruction. Other responsibilities include responding to requests for information and data from school districts, federal agencies, elected officials, and the general public. Reference library functions and school publications reside within this program.

Reorganization - FY91 data in the above table is not comparable to the FY92 and FY93 base budget.

The base FY92 and FY93 FTE and budget reflect a planned reorganization of legal staff (4 FTE) and their related operating expenses from this program to the State Superintendent's Program, but the appropriated FY91 column does not. Our workload did not permit us to prepare the budget. SBAS and payroll forms necessary to complete the reorganization prior to preparing our 1992-93 budget

request.

Actual FY90 FTE and expenditures shown above have been restated as though the reorganization occurred in that year, thus FY90 data is comparable to the base budget for FY92 and FY93.



	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr./Decr	----- Recommended	----- Base	Fiscal 1993 Incr./Decr	----- Recommended
Full Time Equivalent Employees	32.85	37.75	32.85	.00	32.85	32.85	.00	32.85
Personal Services	929,445.53	1,127,979	1,008,096	2,307	1,010,403	1,007,002	2,303	1,009,305
Operating Expenses	461,874.31	558,308	608,441	-18,582	589,859	611,827	-24,431	587,396
Equipment	63,829.37	28,095	26,104	28,491	54,595	26,104	1,991	28,095
Transfers	360,000.00	490,641	420,195	4,854	425,049	420,195	6,031	426,226
Total Agency Costs	\$1,815,149.21	\$2,205,023	\$2,062,836	\$17,070	\$2,079,906	\$2,065,128	\$-14,106	\$2,051,022
General Fund	982,221.54	1,269,772	1,201,838	17,070	1,218,908	1,200,366	-14,106	1,186,260
State Special Revenue Fund	4,965.19	5,000	5,000	0	5,000	5,000	0	5,000
Federal Special Revenue Fund	52,972.48	51,865	11,634	0	11,634	11,755	0	11,755
Proprietary Fund	774,990.00	878,386	844,364	0	844,364	848,007	0	848,007
Total Funding Costs	\$1,815,149.21	\$2,205,023	\$2,062,836	\$17,070	\$2,079,906	\$2,065,128	\$-14,106	\$2,051,022

## Overview

This activity provides for management of the Operations Department, analytical support for the Superintendent, and the personnel function for the agency. The Operations Department is responsible for reporting, distributing and accounting for approximately \$450,000,000 in funds provided to school districts and used to fund operations of the Office of Public Instruction. Management of HB28 and GAAP reside within this activity. The staff also provide data/word processing and research support for the office.

## Goals

The major goals include: effective management of the Department, successful management of HB28 and GAAP, staff support for the Superintendent to carry out her constitutional and statutory functions, staff support to the HB28 Interim Committee, and development and implementation of a personnel/policy/training system consistent with Montana statute and administrative rule.

## Authorization

### Federal/State

#### Statute or Regulation

<u>Title and Description</u>	
Montana Constitution; authorizes an elected Superintendent of Public Instruction. Authorizes the Superintendent up to 15 personal staff.	Article VI, Section I
General statutory provisions governing Schools; establishes responsibilities of the Superintendent.	Article VI, Section 4,
	Title 20 M.C.A.
Montana Constitution; establishes the Superintendent as a member of the Land Board. Establishes the duties of the Land Board.	Article X, Section IV
	Title 77 M.C.A.
(b) Montana Constitution; establishes the Superintendent as an ex-officio member of the Board of Education, Board of Regents, Board of Public Education.	Article X, Section 9
Uniform Accounting System and Expenditure Control.	17-1-102, M.C.A.
Segregation of Moneys.	17-2-103, M.C.A.
Indirect Cost Rates.	17-3-111, M.C.A.
Agency Program Budgets.	17-7-111, M.C.A.
Administrative responsibilities of Grantee.	Education Department
	General Administrative
	Regulations, (EDGAR)
	Parts 75, 76, 77, 79,
	80, 81, and 85
Authorizes the Superintendent to employ a Deputy Superintendent.	20-3-103 M.C.A.
Authorizes the Superintendent to employ one or more Assistant Superintendents plus "any other supervisors or assistants to carry out the duties of his office."	20-3-104 M.C.A.
Preserve all books, educational media... and any other articles of educational interest....	20-3-105 M.C.A.
Division of Resource and Assessment account.	20-3-108 M.C.A.
Responsibility to provide instructional assistance.	20-7-104 M.C.A.
Responsibility to maintain curriculum guide files and publish curriculum guides.	20-7-113 M.C.A.



20-7-131 M.C.A.	Responsibility to issue secondary equivalency certificates.
20-7-201 M.C.A.	Responsibility to maintain an audio visual library.
20-7-3-1 M.C.A.	Responsibility for K-12 vocational education, including: state plan, establish standards for courses and programs, review process for establishment and deletion of programs, instructor qualifications, course criteria, apportion monies, and evaluate programs.
20-7-403 M.C.A.	Responsibility to administer special education, (14 specific tasks).
20-7-431 M.C.A.	Requirement for the Superintendent to make rules and account for special education expenditures by reviewing and approving all special education budgets.
20-70502 M.C.A.	Requirement to develop, administer and supervise the state traffic education program, (8 responsibilities).
20-7-604 M.C.A.	Requirement to license all textbook dealers.
20-7-712 M.C.A.	Requirement to manage adult basic education by directing the distribution of funds appropriated by the Legislature.
20-7-903 M.C.A.	Responsibility to propose rules and approve programs for gifted and talented children.
20-7-1001 M.C.A.	Responsibility to promote and encourage telecommunications in education.
20-9-102 M.C.A.	Responsibility for general supervision over the school budgeting procedures and provisions.
20-9-346 M.C.A.	Responsibility to administer distribution of state equalization aid, (6 responsibilities).
20-9-369 M.C.A.	Responsibility to administer distribution of guaranteed tax base aid.
20-9-532 M.C.A.	Responsibility to administer retirement equalization aid.
20-9-603 M.C.A.	Responsibility to request and accept any available federal monies.
20-10-103 M.C.A.	Responsibility to set certification standards for school bus drivers.
20-10-112 M.C.A.	Responsibility to administer and supervise the school transportation program (8 duties including the approval of all bus routes and transportation contracts and disbursement of funds).
20-10-201 M.C.A.	Responsibility to administer a school foods program.
Title 49, Chapter 2, M.C.A.	Discrimination in employment, generally.

Title 49, Chapter 3, M.C.A.	Discrimination in Government services and employment Fair Labor Standards Act - Governs overtime and compensatory time.
Title 2, Chapt. 18, M.C.A.	Employee Classification system, Leave administration, etc.
Title 39, Chapt. 31, M.C.A.	Public Employee Collective Bargaining, Unfair labor practices, etc.
Title 39, Chapt. 2, M.C.A.	Wrongful discharge.
Title 39, Chapt. 30, M.C.A.	Veteran and Handicap Preference.
42 USC 2000e et seq.	Discrimination in employment generally.
29 USC 621 et seq.	Prohibits Age discrimination.
29 USC 201 et seq.	Equal Pay Act - Prohibits pay differentials based on sex.
29 USC 791	Rehabilitation Act - Prohibits discrimination against the handicapped.

## Base Program

The Operations Department is responsible for reporting, distributing, and accounting for approximately \$450,000,000 in appropriated and non-appropriated funds provided to school districts and used to fund operations of the Office of Public Instruction. Activities include the management of the Operations Department, analytical support for the Superintendent, and the personnel function for the agency.

The Personnel Officer is responsible for oversight of all personnel functions in the agency. Duties include review and approval of all hiring decisions, review of position descriptions, maintaining applicant and employee tracking systems, designing and presenting training opportunities for staff, designing and implementing performance appraisal systems, advising supervisors about disciplinary actions, administration of the OPI personnel policies, negotiation of the union contract, representing management in grievance

proceedings, overseeing the agency EEO programs.

The Accounting and Budgeting section provides financial services to the Office of Public Instruction. Under base funding, the objective of the section's 10.85 FTE is to timely and properly budget, account for, expend and report \$450,000,000 in appropriated and non-appropriated State and Federal moneys.

The Mail Room is staffed by 2 FTE and is responsible for providing the following services to 128 FTE in the Office of Public Instruction: mail pickup and delivery, bulk mail addressing, stuffing, sorting and mailing, check logging for all incoming funds, coordination of printing requests and deliveries, pickup and delivery of supplies, and general warehouse responsibilities.

The Word Processing section is staffed by 6 FTE and is responsible for providing the following services to 128 FTE in the Office of Public Instruction: converting dictation



to typed material, rough draft and final draft typing, development of printed curriculum materials (including newsletters, brochures, pamphlets, instruction guides, etc.), data entry services, photocopying, proofreading, and general secretarial services.

The data processing section provides supervisory, programming, network administration and operations staff to maintain and operate the Honeywell, Gifford, and wide-area network computer systems in the Office of Public Instruction. Currently over 360 computer programs exist which are used to administer and report on the state of education in Montana.

The Resource Center maintains an in-house collection of material specifically oriented toward and supportive of those mandated programs which staff are directed to carry out; provides immediate, priority service in handling reference and research requests; and contributes to the history of the agency and its programs by maintaining an archival collection of its publications.

## Base Funding

The Assistant Superintendent for Operations and analytical support staff are funded from the General Fund. The personnel officer's salary and operating expenses are paid from the indirect cost pool, which is a proprietary fund.

The Accounting and Budgeting section is funded from indirect cost pool. The pool receives its revenue from indirect cost assessments on the Office's non-general fund programs and a transfer from the General Fund. Functions dealing with equalization and transportation aid payments to school districts are funded from the General Fund.

The Mail Room and Word Processing sections are funded by the indirect cost pool.

The data processing section is funded from the General Fund and federal monies.

The Resource Center is funded by the indirect cost pool, State Special funds, and Federal Chapter 2 monies (15%).

## Performance Indicators

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
<u>Operations</u>				
Personnel Actions/ Sessions	17	36	34	46
<u>Accounting</u>				
Appropriations	\$385M	\$410M	\$410M	\$410M
<u>Federal Grants</u>				
accounted for/ reported on	30	33	33	33
<u>Transactions</u>				
processed in SBAS	68,725	70,000	70,000	70,000
<u>SBAS Cost Centers</u>				
maintained	9,030	9,030	9,030	9,030
<u>Reports Reviewed:</u>				
Budgets	544	544	544	544
GTB	4,896	11,968	11,968	11,968
<u>Data/Word Processing, Mail Room</u> (Hours, including comp.time)				
Supervision	3,016	3,016	3,016	3,016
Word Processing Support	13,432	13,432	13,432	13,432
Mail/Printing Services	4,742	4,742	4,742	4,742
Network Maintenance & Administration	9,360	9,360	9,360	9,360
Training/Workshops	560	560	560	560
Federal Coord.	300	300	300	300

<u>Workload Measures</u>	<u>FY90</u>	<u>FY91</u>	<u>FY92</u>	<u>FY93</u>
	<u>Actual</u>	<u>Enacted</u>	<u>Base</u>	<u>Base</u>
<u>Resource Center</u>				
References and Requests	2140	2310	2310	2310
In-Service/Workshops	60	125	125	125
Books/Items borrowed from and/or lent to other libraries and Schools	1680	1700	1700	1700
Cataloging	574	700	650	650

### **Increase and Decrease to Base**

#### Program Transfer

The "incr/decr" columns in the table on page 17 include a program transfer to the State Superintendent's Program of \$28,931 in FY92 and \$(29,106) in FY93. This program transfer was specifically allowed by the Governor's budgeting instructions. It is a transfer of base budget authority to reflect actual FY90 experience and is not a decrease in the Office of Public Instruction's total budget.

#### Fee Assessments - Conferences

The Office of Public Instruction has historically collected registration fees from persons attending various conferences and workshops we sponsor, but has not requested appropriation authority to spend amounts collected. Rather than request spending authority for fees collected, the previous OPI administration abated expenditures associated with conducting the workshops/conferences. Accounting for these activities by abating expenditures, rather than recording revenues from fees collected, is not in accordance with generally accepted accounting principles.

In order to account for this activity properly during the 1990-91 biennium, the current administration has recorded fees collected as revenue and deferred certain capital expenditures to conduct the above workshops/conferences within current level funding, a practice we cannot continue

beyond the current biennium.

Approximate annual fees collected include:

Superintendent's Conference -	3,500
Chapter I Workshop -	10,000
AIDS Workshop -	1,600
GESA Workshop -	200
	<u>\$ 15,300</u>

Fees collected in FY90 have been deposited in the General Fund. This is a request for appropriation authority to spend the workshop/conference registration fees OPI will deposit in the General Fund during the 1990-91 and the 1992-93 bienniums.

**FUNDING REQUESTED:** FY92 FY93  
General Fund \$46,000 \$15,000

#### Indicator System

One of the difficult aspects of education accountability and improvement is the capacity to assess the long term effectiveness of our educational system. Education data is diverse and not collected in formats that are easily comparable.

This proposal would provide three staff and related expenses to establish a state education indicators system and to compile and analyze existing district, secondary vocational education, adult education, GED, curriculum accreditation, assessment and certification information resident within the Office of Public Instruction.

Regular records maintenance staff support (1.0 FTE) would be necessary to compile and maintain the data throughout the year. Staff would work with appropriate agencies and local districts to develop an education data base compatible with long-term follow-up. Included in the development considerations would be the possibility of implementing a follow-up system on student who leave the education system in conjunction with employment, income tax, welfare, and census data.

Because this emphasis appears to be the key to President Bush's education proposals for next year, we would anticipate some federal financial support for this project, above the anticipated level of common core data (CCD) support of \$30,000. We would anticipate reducing the



general fund request dollar for dollar if federal support is in excess of \$30,000 during the next biennium.

#### FUNDING REQUESTED:

	FY92	FY93
FTE	3.00	3.00
General Fund	\$117,647	\$88,848
Federal Special Revenue	\$ 15,000	\$15,000

#### Other Issues

Financial Management and Data Processing Staffing  
The Operations Department requests continued funding for an accountant currently authorized by HB16 for training school districts in the proper application of accounting principles and for financial reviews; two administrative officers and an administrative assistant to help in the distribution/accountability of monthly foundation and GTB payments and transportation payments; two budget officers; two programmers; two support staff for data editing, communication with school districts, and report generation; and three data entry staff. Additional operation expenses are necessary for computer maintenance/subscription costs.

Numerous statutory requirements and changes have created workload demands on the Operations Department which we are unable to meet with existing resources. In the accounting area, we annually distribute over \$440,000,000 to 538 school districts. With the conversion to generally accepted accounting principles (GAAP), beginning September of 1991 (FY92) we will have to review financial reports of the 538 school districts to ensure compliance with GAAP (20-9-201 (2)) while continuing to teach GAAP and annual updates to business clerks, county superintendents, and school superintendents.

Additional new responsibilities include administering more than \$44 million in guaranteed tax base provisions in the general fund and Teachers' Retirement, monitoring reserve limits, and permissive and voted levy limits, and developing reporting and monitoring systems for the revised accreditation standards.

An administrative officer, 4 programming/support staff and three keypunchers are required to develop and maintain the

computer systems for telecommunications, school transportation and accreditation.

Continued funding for the third accountant authorized by HB16 is requested for the ongoing GAAP training effort, to review school district audits for compliance and to follow up on audit exceptions to ensure they are corrected. The audit reviews are necessary to meet federal single audit requirements or millions of dollars in federal funding for schools is at risk. An additional Administrative Officer and an Administrative Assistant will be required to review school district reports for compliance with guaranteed tax base and levy and reserve limit requirements.

OPI has one of the largest budgets in state government, but has no budget analysts. By comparison, the department of fish wildlife and parks has a \$30 million budget and has 2 budget analysts; the department of institutions central office has a \$77 million budget and 3 budget analysts; the department of highways has a \$265 million budget and 3 budget analysts. OPI has financial management responsibilities for approximately \$450 million and no budget analysts.

The accountant, two administrative officers, administrative assistant and two budget officers are critical to ensure minimum compliance with the financial requirements outlined in 20-7-431 M.C.A. (Special Ed. \$33.5M) 20-7-502 M.C.A. (Traffic Education \$1.7M), 20-7-712 M.C.A. (Adult Education \$750,000), 20-7-1001 M.C.A. (Telecommunications \$500,000), 20-9-102 M.C.A. (School Budgeting \$600+M) 20-9-346 M.C.A. (State Equalization Aid \$347M), 20-9-367 M.C.A. (Guaranteed Tax Base Aid \$30M), 20-9-368 M.C.A. (Retirement Equalization Aid \$14.5M), 20-10-112 M.C.A. (School Transportation \$18M), and 20-7-301 M.C.A. (K-12 Vocational Education \$900,000).

#### FUNDING REQUESTED:

	FY92	FY93
FTE	13.00	13.00
General Fund	\$469,331	\$402,223
Proprietary Fund	\$ 72,300	\$ 60,270

Single Building for the Office of Public Instruction  
OPI's 128 staff are currently housed in 6 separate

locations. In dealing with the general public, it is frequently necessary for the public to go to five different locations. As we move into the computer/telecommunications age, it is critical for our specialists to be in the same facility as our AV Library. Additionally, phone traffic, messages, staff supervision and general efficiency of the office suffer greatly in the present environment.

Options being considered range from a separate, single building being built at \$5,000,000 to leasing a single building for an additional \$180,000 per year. (Present space requirements for existing staff are approximately 45,000 square feet).

**FUNDING REQUESTED:**

	<u>FY92</u>	<u>FY93</u>
General Fund		
Rent/Janitorial	\$235,600	\$180,300

Resource Center Fund Balance

This budget modification would allow the Office of Public Instruction's Resource Center to spend accumulated revenues for the purpose of upgrading equipment and documents used in providing services to staff and school districts.

The Resource Center serves as an information and research library for the staff of the Office of Public Instruction and for Montana's school districts, providing online and CD-RM searches and document delivery. Information needs are diverse and frequently urgent. It is crucial that the information be accurate, current and expedient. To fill these requirements, the Resource Center purchases materials and subscribes to numerous journals and data sources (online and CD-RM).

The Resource Center is partially funded from fees charged for documents and on-line searches. The fees received are deposited in a State Special Revenue account in accordance with 20-3-108, MCA. Revenues received have exceeded expenditures incurred in this account for a number of years and a balance of \$8,000 has accumulated. If approved, this budget modification would allow the Office of Public Instruction to use these accumulated revenues to purchase current journals, books, and microfiche reports, to replace

a five year old personal computer, and to purchase a single disk CD-ROM drive to read data currently accessed using an expensive on-line service.

The computer change and CD-ROM are necessary for the Resource Center to effectively participate in the statewide telecommunications effort.

**FUNDING REQUESTED:**

	<u>FY92</u>	<u>FY93</u>
State Special Revenue Fund	\$8,000	\$0



## PUBLICATIONS

Full Time Equivalent Employees	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr	Base	Incr/Decr
	.00	.00	.00	.00	.00	.00
Personal Services	4,053.65	0	0	0	0	0
Operating Expenses	44,122.84	13,500	37,500	0	13,500	0
<b>Total Agency Costs</b>	<b>\$48,176.49</b>	<b>\$13,500</b>	<b>\$37,500</b>	<b>\$0</b>	<b>\$13,500</b>	<b>\$0</b>
General Fund	47,083.83	13,500	37,500	0	13,500	0
Proprietary Fund	1,092.66	0	0	0	0	0
<b>Total Funding Costs</b>	<b>\$48,176.49</b>	<b>\$13,500</b>	<b>\$37,500</b>	<b>\$0</b>	<b>\$13,500</b>	<b>\$0</b>

## Overview

This activity involves the publication and distribution of the School Laws of Montana and the Directory of Montana Schools.

## Goals

- To print a complete and updated volume of the school laws of the state, or a cumulative supplement to the most recent volume of the laws, and to print a current directory of public schools.
- To offer and sell the law book to school officials and the public at the cost of printing and shipping.

## Authorization

Federal/State

Statute or Regulation	Title and Description
20-3-105 (5), MCA	Powers and Duties of the State Superintendent

## Base Program

Under base funding, print and distribute 2500 copies of new School Laws of Montana and print and distribute 3,350 copies of a current Directory of Montana Schools. Base funding is for operating expenses only and does not include the Personal Services costs associated with updating the law book or the directory. The 1989 session law books

were sold in FY90 for \$12 per copy, recovering both the personal service and operating costs of printing and distribution. Directories are provided free of charge to each school building and central office. Schools and others requesting additional copies of the directory are charged \$3 for each additional copy.

## Base Funding

Costs associated with printing and distributing the law books and the school directories are funded from the General Fund. All revenues from the sale of the law books and the directories are deposited in the General Fund. Additionally, the Office of Public Instruction transferred a cash balance in the Publication Account of \$30,300 to the General Fund in FY90 because, effective July 1, 1989, the Publications Account was reclassified from Special Revenue to General Fund.

## Performance Indicators

Workload Measures	FY90		FY91		FY92		FY93	
	Actual	Enacted	Actual	Enacted	Actual	Enacted	Actual	Enacted
School Law Books Printed	2,500	-0-	-0-	2,500	-0-	-0-	-0-	-0-
Directories Printed	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350

**Increase or Decrease from Base**  
None.

## HB28 AND HB16

Full Time Equivalent Employees	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993		Recommended	Fiscal 1992 Incr/Decr	Base	Fiscal 1993 Incr/Decr	Recommended
			Base	Incr/Decr	Base	Incr/Decr					
Personal Services	40,144.95	84,176	63,212	145	63,306	145	63,357	2.00	2.00	.00	2.00
Operating Expenses	69,022.03	49,436	114,467	-5,800	115,107	-4,800	108,667	2.00	115,107	145	63,451
Equipment	113,001.52	9,974	0	5,800	0	4,800	5,800	2.00	0	4,800	110,307
<b>Total Agency Costs</b>	<b>\$222,168.50</b>	<b>\$143,586</b>	<b>\$177,679</b>	<b>\$145</b>	<b>\$178,413</b>	<b>\$145</b>	<b>\$177,824</b>		<b>\$178,413</b>	<b>\$145</b>	<b>\$178,558</b>
General Fund	222,168.50	143,586	177,679	145	178,413	145	177,824		178,413	145	178,558
<b>Total Funding Costs</b>	<b>\$222,168.50</b>	<b>\$143,586</b>	<b>\$177,679</b>	<b>\$145</b>	<b>\$178,413</b>	<b>\$145</b>	<b>\$177,824</b>		<b>\$178,413</b>	<b>\$145</b>	<b>\$178,558</b>

## Overview

School districts are required to adhere to the statutory budget requirements established in HB28, maintain accounting systems based on generally accepted accounting principles (GAAP), file accurate and timely reports and provide student and school district data as may be required by OPI to determine the condition of education in Montana and to determine the amount of state aid and guaranteed tax base subsidy to be distributed to schools.

## Goals

- To provide for an effective and efficient implementation of the new school funding process in the state of Montana.
- To provide training and assistance to public school districts in the areas of accounting and reporting, through workshops, telephone assistance, written guidance, and updates to the School Accounting Manual, assisting districts in complying with the new requirements of HB28 and HB16.
- To improve the way in which districts account for and report the results of their financial affairs.
- To improve the Office's internal system of monitoring and enforcing district compliance with HB28 and HB16 restrictions and with the Single Audit Act.



## Authorization

### Federal/State Statute or Regulation

#### Title and Description

OMB Circular A-28

Single Audit Act.

Title 20 - Education

Chapter 9 - Finance. Gives the State Superintendent general supervisory authority over school financial administration provisions.

20-9-346 M.C.A.

Responsibility to administer distribution of state equalization aid, (6 responsibilities).

20-9-369 M.C.A.

Responsibility to administer distribution of guaranteed tax base aid.

20-9-532 M.C.A.

Responsibility to administer retirement equalization aid.

20-9-603 M.C.A.

Responsibility to request and accept any available federal monies.

20-10-112 M.C.A.

Responsibility to administer and supervise the school transportation program (8 duties including the approval of all bus routes and transportation contracts and disbursement of funds).

## Base Program

The HB16-GAAP, or School District Accounting section, provides accounting and reporting information and assistance to Montana's school districts.

Under base funding, the objectives of the section's three FTE will be to provide workshops, varying in length from 1 to 5 days, in each of at least seven regions of the State covering beginning, intermediate and advanced accounting and reporting procedures for Montana's school districts; to write an accounting manual for school districts to aid in the budgeting, accounting and reporting of their financial affairs; to redesign all accounting and budgeting forms used by districts to report to OPI; to review districts' reports and system edit/error reports for district non-compliance with statutory restrictions and requirements; to review and monitor the completion of school district audit reports; and to prepare accurate and timely financial reports required by the National Center for Education Statistics.

The House Bill 28 - Implementation budget provides funds

for implementing the new school funding process. The funds cover the costs of developing administrative rules, designing new data collection forms, hiring additional computer programming staff to write computer programs, developing computer programs, obtaining additional computer equipment necessary to implement the new legislation, conducting seminars for local school district administration staff and providing funds for general costs involved in implementing the new school funding legislation.

## Base Funding

In support of our current HB16 appropriation, the Office of Public Instruction provided testimony and a proposed budget to the Joint Education Committee during the last Legislative Session, stating implementation would take three years. By comparison, implementation of generally accepted accounting principles by state agencies took five years.

HB-28 Implementation was a special program set up by the 1989 special legislative session to implement the new school funding process. There will be ongoing costs once the program has been implemented. These costs include

computer programming support, data entry, maintenance of computer equipment purchased during the implementation phase, postage and mailing for transmittal of reports, telephone charges for transmittal of data between the Office of Public Instruction and the 538 school districts, workshops to provide new and continuing education for school district staff training on how to transmit data and use electronic systems.

### Performance Indicators

Workload Measures	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
School District Clerks Trained	400	400	400	400
GAAP workshops	7	30	30	30
Districts using double-entry accounting	55%	70%	85%	100%
Reports reviewed: Trustee reports	545	545	545	545
Audit reports	250	250	250	250
Edits/error reports	0	218	109	55
Reporting Requirements workshops	20	20	20	20
# of lines on Foundation/Equalization forms*	1,623,038	1,623,038	1,623,038	1,623,038

\*Calculated at 10 sec. per line (punch and verify) = 16,230,380 seconds \ 60 = 270,506 min. \ 60 = 4508 hrs. 4508 \ 2080 = 2.16 FTE. Data entry is currently performed by staff data entry and Dept. of Administration. Changes in Education funding have required additional data entry resources, and will continue to require data entry in future years.

### Increase or Decrease From Base

None.

### Other Issues

#### Current Level FTE

Current level FTE in this activity is 4.0. The Governor's budget omitted 2.0 FTE because it was developed prior to the third and fourth FTE coming on board. A 2.0 FTE increase is requested to reflect current staffing, at no additional increase in appropriation authority.



	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr	----- Recommended	----- Base	Fiscal 1993 Incr/Decr	----- Recommended
Full Time Equivalent Employees	76.88	81.98	76.88	6.00	82.88	76.88	6.00	82.88
Personal Services	2,182,954.83	2,579,168	2,495,382	180,892	2,676,274	2,490,998	180,479	2,671,477
Operating Expenses	1,614,062.15	1,662,840	1,645,939	670,842	2,316,781	1,653,963	721,854	2,375,817
Equipment	123,720.38	19,803	55,257	44,714	99,971	55,257	28,546	83,803
Local Assistance	14,050.86	0	0	0	0	0	0	0
Grants	14,796.01	0	0	430,800	430,800	0	436,800	436,800
<b>Total Agency Costs</b>	<b>\$3,949,584.23</b>	<b>\$4,261,811</b>	<b>\$4,196,578</b>	<b>\$1,327,248</b>	<b>\$5,523,826</b>	<b>\$4,200,218</b>	<b>\$1,367,679</b>	<b>\$5,567,897</b>
General Fund	1,028,097.46	1,184,453	1,115,322	111,415	1,226,737	1,116,234	108,814	1,225,048
State Special Revenue Fund	357,032.88	371,475	366,039	12,500	378,539	366,285	13,532	379,817
Federal Special Revenue Fund	2,564,453.89	2,705,883	2,715,217	1,203,333	3,918,550	2,717,699	1,245,333	3,963,032
<b>Total Funding Costs</b>	<b>\$3,949,584.23</b>	<b>\$4,261,811</b>	<b>\$4,196,578</b>	<b>\$1,327,248</b>	<b>\$5,523,826</b>	<b>\$4,200,218</b>	<b>\$1,367,679</b>	<b>\$5,567,897</b>

## Overview

The Educational Services Program administers all federal grants received by the Office of Public Instruction. This program also administers vocational education, adult basic education, the film library, drivers' education, school food services and audiology.

Reorganization - FY91 data in the above table is not comparable to the FY92 and FY93 base budget.

The base FY92 and FY93 FTE and budget reflect a planned reorganization of certification/accreditation staff (6 FTE) and their related operating expenses from this program to the State Superintendent's program, but the appropriated FY91 column does not. Our workload did not permit us to prepare the budget, SBAS and payroll forms necessary to complete the reorganization prior to preparing our 1992-93 budget request.

Actual FY90 FTE and expenditures shown above have been restated as though the reorganization occurred in that year, thus FY90 data is comparable to the base budget for FY92 and FY93.

Full Time Equivalent Employees	Fiscal 1990	Fiscal 1991	Fiscal 1992	Fiscal 1992		Fiscal 1993	Fiscal 1993	
	Actual	Appropriated	Base	Incr/Decr	Recommended	Base	Incr/Decr	Recommended
	18.00	18.00	18.00	.00	18.00	18.00	.00	18.00
Personal Services	502,345.48	661,108	660,881	1,523	662,404	659,285	1,516	660,801
Operating Expenses	140,803.03	293,000	303,024	-54,878	248,146	302,917	-51,037	251,880
Equipment	12,023.70	0	0	4,200	4,200	0	2,100	2,100
Total Agency Costs	\$655,172.21	\$954,108	\$963,905	\$-49,155	\$914,750	\$962,202	\$-47,421	\$914,781
General Fund	362,325.00	439,586	449,383	0	449,383	447,680	0	447,680
Federal Special Revenue Fund	292,847.21	514,522	514,522	-49,155	465,367	514,522	-47,421	467,101
Total Funding Costs	\$655,172.21	\$954,108	\$963,905	\$-49,155	\$914,750	\$962,202	\$-47,421	\$914,781

## Overview

Curriculum Assistance services include technical assistance in specific curriculum areas as well as special areas of education such as early childhood and middle school programs and services for students who are identified as gifted or talented or those who have risk factors for success. Staff employed here write curriculum, recommend educational materials and teaching techniques, conduct accreditation visits and provide training to those associated with education. In addition, they plan, direct and assess the Montana Effective Schools Program as required by the federal Elementary and Secondary Education Act of 1988.

## Goals

The goal of this program is to improve education for students in Montana by providing technical assistance, monitoring school programs, and implementing an effective schools program.

## Authorization

<u>Federal/State Statute or Regulation</u>	<u>Title and Description</u>
P.L. 100-297	Augustus F. Hawkins - Robert T. Stafford Elementary and Secondary Education Improvement Act of 1988.
34 CFR Part 76,77,298	Federal, State and Local Partnership for Educational Improvement.



20-3-103-, 20-3-104 MCA Deputy Superintendent--Staff, Discretionary Staff.  
 20-3-106 MCA Supervisor of Schools--Powers and Duties.

## Base Program

The Effective Schools Program is planned, implemented and assessed by curriculum assistance staff. Publications, inservice training and research associated with this program are provided.

Accreditation reviews of schools are conducted. Technical assistance in meeting accreditation standards is provided.

Inservice training in educational procedures, materials and techniques to meet the needs of students is provided through statewide, regional, district and even individual conferences and contacts.

Collaboration with other state and local agencies, as well as professional groups for planning, training and grant writing, is done to meet needs of special populations.

Curriculum guides and other technical assistance publications are developed by staff in this program.

Two curriculum specialist positions have been vacant for nine months of FY90. Projected workload increases reflect the filling of both positions for FY91.

## Base Funding

Funding for Curriculum Assistance is provided by state General Fund and federal funds received under Chapter 2 of the Elementary and Secondary Improvement Act of 1988.

## Performance Indicators

Workload Measure	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
Inservice Training Provided	444	504	504	504
Contacts with Professional Organizations--not including phone contact	230	250	250	250

Workload Measure	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
School Monitoring-- Accreditation middle school approval, monitoring for Civil Rights compliance	70	90	150	150
Phone Contacts	24,355	27,250	27,350	27,350
Electronic Communication	600	700	900	1,200
On-site School Visitations;some duplication with school monitoring	947	1,000	1,000	1,000
<u>Publications</u>				
90--Revise CURRICULUM DEVELOPMENT PROCESS GUIDE First Half--Science Curriculum Guide First Half--Health Enhancement Curriculum Guide				
91--Complete Science Curriculum Guide Complete Health Enhancement Curriculum Guide Complete Effective Schools Guide Book First Half--Fine Arts Curriculum Guide First Third--Communication Arts Curriculum Guide First Half--Math Curriculum Guide				
92--Complete Fine Arts Curriculum Guide Complete Math Curriculum Guide Second Third--Communication Arts Curriculum Guide First Half--Guidance Curriculum Guide				
93--Complete Communication Arts Curriculum Guide Complete Guidance Curriculum Guide Revise Effective Schools Guide Book				

## Increases and Decreases to Base

### Revenue Adjustment

The "incr/decr" columns in the table on page 30 include a base adjustment of \$(49,155) in FY92 and \$(47,421) in FY93. This adjustment, specifically allowed by the Governor's budget instructions, transfers authority between "activities" within the Educational Services Program. It does not represent a decrease in the Office of Public Instruction's total budget.

### ESEA Chapter 2

During 1989, a new Chapter 2 law went into effect requiring major changes in the program and implementation of new requirements. In addition, the U.S. Department of Education conducted a program compliance review and made strong recommendations to increase supervision of the Chapter 2 program.

The new Chapter 2 law has requirements which demand additional time of a program specialist in the following ways:

1. A more elaborate district application process has at least doubled the time involved in approving the 538 district proposals.
2. Calls for technical assistance have increased significantly as districts need help completing the new, more complex district application.
3. The annual evaluation is now more extensive as Congress tries to gather information on the effectiveness of these dollars.

Moreover, the U.S. Department of Education recommends more supervision of the program as outlined below:

1. A system of monitoring more districts needs to be implemented. In the past, very few districts were monitored for compliance with the law and regulations. The federal program officer stated that past practices were woefully inadequate and could jeopardize our state's grant as an audit exception. OPI has worked with the federal office on an adequate monitoring schedule which will entail a review of each district once every three years. Approximately 178 districts will need to be monitored each year.
2. OPI needs to assist districts in better supervision of Chapter 2 services for nonpublic schools.
3. OPI must make a better effort to assure that districts are keeping inventories of goods purchased with these

funds and labeling equipment with "Chapter 2."

In FY 90, over \$1.9 million was allocated to Montana school districts for Chapter 2 programs. These are some of the few dollars targeted for "school improvement."

### **FUNDING REQUESTED:**

<b>Federal Funds</b>	<b>FY92</b>	<b>FY93</b>
	<b>\$141,843</b>	<b>\$141,843</b>

### **Other Issue:**

Curriculum Specialists Fully Funded Out of the General Fund or the Foundation Program

The office presently has 11 **basic education curriculum specialists** to provide instructional assistance, inservice training, maintain and publish curriculum guides, support the telecommunications project, and perform mandatory accreditation visits as required by 20-7-102 MCA, 20-7-113 MCA, and 20-7-114 MCA. These staff provide services to over 9,500 teachers in 538 school districts. Their workload is compounded by the fact that approximately half are elementary teachers requiring services in every elementary curriculum area. The total current level budget for these 11 curriculum staff is approximately \$915,000, \$465,000 of which is paid for with federal money.

The federal funding is Chapter 2 money for effective schools with restrictions for use in targeted areas. The rational is that these funds be used for **EXTRA** materials, workshops, and travel to support and supplement the basic program of instruction. Because our funding level does not provide even a basic program, it is questionable to use Chapter 2 funds for this effort.

The specialists are in math, science, elementary curriculum, foreign language, social science, art education, library media, gifted and talented, language arts, reading, and health enhancement.

It is unreasonable and poor public policy to have the federal dollar dictate half of our specialists' work product. If my office is going to provide the critical guidance necessary for the accreditation standards, it is imperative the positions be divorced from the federal funding mechanism.

### **FUNDING REQUESTED:**

<b>General Fund -OR- State Special Revenue</b>	<b>FY92</b>	<b>FY93</b>
	<b>\$480,367</b>	<b>\$482,101</b>



## CHAPTER 1/MIGRANT ADMINISTRATION

Full Time Equivalent Employees	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
	8.25	8.25	8.25	.00	8.25	8.25	.00	8.25
Personal Services	220,109.49	260,774	260,732	599	261,331	260,487	596	261,083
Operating Expenses	119,983.10	64,600	64,991	35,678	100,669	65,694	35,223	100,917
Equipment	11,670.45	0	0	0	0	0	0	0
Grants	0.00	0	0	320,000	320,000	0	320,000	320,000
<b>Total Agency Costs</b>	<b>\$351,763.04</b>	<b>\$325,374</b>	<b>\$325,723</b>	<b>\$356,277</b>	<b>\$682,000</b>	<b>\$326,181</b>	<b>\$355,819</b>	<b>\$682,000</b>
Federal Special Revenue Fund	351,763.04	325,374	325,723	356,277	682,000	326,181	355,819	682,000
<b>Total Funding Costs</b>	<b>\$351,763.04</b>	<b>\$325,374</b>	<b>\$325,723</b>	<b>\$356,277</b>	<b>\$682,000</b>	<b>\$326,181</b>	<b>\$355,819</b>	<b>\$682,000</b>

## Overview

ESEA Chapter 1 of Public Law 100-297 allocates funds to local school districts to provide supplementary remedial services to students and includes supportive services for migrant children.

The Chapter 1 office provides for the administration and management of the ESEA Chapter 1 programs in Montana. The program provides fiscal management of Chapter 1 funds.

## Goals

Provide fiscal management, policy direction, and overall supervision to local school districts in accordance with P.L. 100-P.L. 100-297

## Authorization

Federal/State

Statute or Regulation

Title and Description

P.L. 100-297

Augustus F. Hawkins - Robert T. Stafford Elementary and Secondary School Improvements of 1988.

34 CFR Parts 200 & 204,  
201, 203, 116B

Chapter 1 Program for Local Educational Agencies, Migrant Children, Neglected and Delinquent Children, State-operated Programs for Handicapped Children.

## Base Program

It is the purpose and responsibility of the Chapter 1 office to insure that the operation of local Chapter 1 projects are in compliance with P.L. 100-297 and to provide technical assistance to local school districts regarding program operation, compliance, fiscal management, and program improvement. All Chapter 1 administrative funds must be used for state administration of Chapter 1 programs at the local school district and state agency institution level and for the summer migrant program. Currently 8 sites serve over 1,200 children of migrant workers, and more than 220 projects provide Chapter 1 remedial services to over 14,000 students.

Chapter 1 administration had a non-filled specialist position for part of Fiscal 1990. The number of migrant programs are expected to increase by one in each year of the 1993 biennium, and the number of migrant students is expected to grow by 500 from fiscal 1991 to 1993.

## Base Funding

Total funding for Chapter 1 administration is provided by the U.S. Government via P.L. 100-297.

## Performance Indicators

<u>Workload Measure</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Number of applications processed	227	237	238	239
Number of workshops	52	52	55	55
Number of projects monitored	88	97	98	99
Number of evaluations processed	227	237	238	239
Number of revisions and Amendments processed	457	457	458	459

## Increases and Decreases to Base

### Revenue Adjustment

The "incr/decr" columns in the table on page 33 include a base adjustment of \$36,277 in FY92 and \$35,819 in FY93. This adjustment, specifically allowed by the Governor's

budget instructions, is a transfer between "activities" within the Educational Services Program. It does not represent an increase in the Office of Public Instruction's total budget.

### Program Improvement Administration

Public Law 100-297 provides new funding to local school districts to participate in the required program improvement established by the statute. Current level Chapter 1 state administration funding is expected to increase because of added responsibilities resulting from the new component of Program Improvement.

### **FUNDING REQUESTED:**

<b>Federal Funds</b>	<b>FY92</b>	<b>FY93</b>
	<u>\$50,000</u>	<u>\$50,000</u>

### Migrant Flow-through

Historically, Chapter 1 Migrant monies received by the Office of Public Instruction for distribution to school districts have not been Legislatively appropriated. Subsequent to submitting a modified budget proposal requesting an appropriation for Migrant flow-through monies, we concluded that the past practice of not appropriating these monies is proper. We, therefore, withdraw our request for an additional \$320,000 in appropriation authority in each year of the 1992-93 biennium.



	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr	----- Recommended	----- Base	Fiscal 1993 Incr/Decr	----- Recommended
Full Time Equivalent Employees	10.50	10.50	10.50	.00	10.50	10.50	.00	10.50
Personal Services	314,992.75	326,915	326,830	749	327,579	326,179	749	326,928
Operating Expenses	161,850.65	202,271	203,684	278,451	482,135	205,083	328,151	533,234
Equipment	4,539.71	0	0	20,800	20,800	0	13,100	13,100
Total Agency Costs	\$481,383.11	\$529,186	\$530,514	\$300,000	\$830,514	\$531,262	\$342,000	\$873,262
General Fund	37,073.66	38,439	38,439	0	38,439	38,439	0	38,439
Federal Special Revenue Fund	444,309.45	490,747	492,075	300,000	792,075	492,823	342,000	834,823
Total Funding Costs	\$481,383.11	\$529,186	\$530,514	\$300,000	\$830,514	\$531,262	\$342,000	\$873,262

## Overview

The Bureau of Special Education provides for overall supervision, fiscal management, technical assistance and monitoring of special education programs and services statewide to handicapped children in public schools, private residential placements and state-operated programs. Fiscal management is exercised over all state and federal special education funds.

## Goals

- Provide overall fiscal management of EHA and state special education funds in accord with P.L. 94-142 regulations and Montana laws.
- Develop policy direction and provide direct technical assistance to school districts and training of personnel.
- Allocate funds to school districts and monitor school districts for compliance in accord with requirements set forth by EHA-B regulations and state special education laws and rules.

## Authorization

<u>Federal/State Statute or Regulation</u>	<u>Title and Description</u>
FEHA 20 USC Sec. 1400-485	The Education for All Handicapped Children Act of 1975 As Amended, (P.L. 94-142).

- 34 CFR Parts 76 and 77      Education Department General Administrative Regulations (EDGAR).
- 34 CFR Part 300      Assistance to States for Education of Children.
- 34 CFR Part 104      Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.
- Section 20, Chapter 7,      Special Education for Exceptional Children.  
Part 4

## Base Program

The Bureau of Special Education conducts the following administrative activities:

- Development of the State Plan for the delivery of special education services in the state (required for the receipt of federal funds).
- Development and dissemination of state special education policies and procedures as they relate to the education of handicapped children.
- Technical assistance to school districts to assist in application for federal and state special education funds.
- On-site monitoring of school districts to ensure compliance with federal and state laws and regulations.
- Technical assistance to districts in program development and operation.
- Review of all program applications for state and federal funding to ensure they meet federal and state regulations.

All administrative activities listed above will be extended to include special education programs for handicapped children between the ages of 3 and 6, pursuant to 20-7-411(3), MCA, which implements federal legislation mandating handicapped preschool special education services.

In addition, on-site technical assistance and parent/staff training is provided to all programs serving the deaf/blind population. The state agency's comprehensive system of personnel development is reviewed annually through a statewide needs assessment and statewide training is coordinated and provided for district personnel with the institutions of higher education, other state agencies, parent and professional groups.

## Base Funding

EHA provides total funding for all administration of Special Education in Montana with the exception of funding the Director of Special Education position. The salary for the director is paid 100 percent out of state general fund. A portion of the special education programs are monitored each year. When larger programs are monitored, as in fiscal 1991, fewer on-site visits are made.

### Performance Indicators

Workload Measure	FY90		FY91		FY92		FY93	
	Actual	Enacted	Base		Base		Base	
Due Process Hearings	7	10	12	12	12	12	12	12
On-Site Monitoring	61	51	60	60	60	60	60	60
Complaint Investigation	13	15	16	16	16	16	16	16
Mediation Hearings	3	4	5	5	5	5	5	5
Workshops	22	22	22	22	22	22	22	22
Interagency Coordinating Activities	27	27	27	27	27	27	27	27
Flow Through Applications (Amendments, transfers, evaluations)	120	120	120	120	120	120	120	120

### Increase to Base

#### EHA-B Administration

OPI expects an increase in federal funding for special education administrative and set aside costs. Four factors contribute to the significant increase:



1. Current level does not include approximately \$80,000 available for administrative set-asides during the 1990-91 biennium. OPI has requested budget amendments in FY90 and FY91 for this additional funding. The additional \$80,000 for administrative set-asides will also be available in 1992-93.
2. For a variety of reasons, we anticipate a significant increase in due process hearings.
3. FTE assigned to monitoring/complaints responsibilities has increased. Federal monitoring of Montana's programs will result in an increased emphasis in this area.
4. We anticipate a significant increase in preschool funds.

Anticipated FY92 Funding

EHA-B Administrative/Set-aside	\$608,000
EHA-D	\$ 80,000
EHA-IVC	\$ 80,000
EHA-Preschool	\$ 75,000
Total	<u>\$843,000</u>

The above figures are based on a projected 10 percent increase over available FY90 funding for EHA-B Administration, EHA-D, and EHA-IVC and a 50 percent increase in EHA-Preschool. FY93 is based on an anticipated 5 percent increase in each program over FY 92.

**FUNDING REQUESTED:**

<b>Federal Funds</b>	<b>FY92</b>	<b>FY93</b>
	<u>\$300,000</u>	<u>\$342,000</u>

Special Education Staffing

This request is for a 2.00 FTE increase over FY 90-91 (11.15 FTE staff currently administer \$34 million in state funds and \$5 million in federal funds.) The increase in FTE positions is as follows:

1.0 FTE Special Education Budget Officer - The Director of Special Education is currently serving as the budget officer. As special education programs throughout the state expand, and funding levels increase, the responsibilities for accountability are enhanced. Decisions with regard to special education funding in this state are not a clerical activity. The responsibilities for the distribution of over \$33 million in state funds is based on an individual review of each budget application for its merits. These merits include assessments of

relative need for additional FTE and program expansion at the district level. In order to make these judgments, it is necessary to understand the complexities of the individual student's needs and to judge the appropriateness of the expansion of services.

Additionally, \$500,000 in contingency requests are distributed annually. The evaluation process for eligibility requires a review of needs based on the district staffing patterns and the needs of individual students. The cost of salary and benefits (Grade 16) would be \$33,273 in each year of the biennium. Operating costs would total approximately \$13,400.

1.0 FTE Administrative Assistant - The Office of Public Instruction's commitment to training and federal requirements under the Education of the Handicapped Act have resulted in expansion of the responsibilities of the Special Education unit in the area of inservice training. The present administrative assistant is serving the Special Education director and two special education monitors. The present responsibilities include maintaining data for the Comprehensive System of Personnel Development (CSPD) that has been incorporated into the State Special Education Plan; issue reimbursements for the Early Childhood Traineeship Awards; and other general office functions. The significant increase in training activities sponsored by the unit is consuming 50% of the present administrative assistant's time, making it difficult to keep up with the other duties assigned to the position. Approval of the above FTE will also increase the need for additional support services. The cost of salary and benefits (Grade 9) would be \$19,578 in each year of the biennium. Operating costs would total approximately \$8,400.

**FUNDING REQUESTED:**

<b>FTE</b>	<b>FY92</b>	<b>FY93</b>
<b>General Funds</b>	<u>2.00</u>	<u>2.00</u>
	<u>\$67,751</u>	<u>\$60,551</u>

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992 Base Incr/Decr	Recommended	Fiscal 1993 Base Incr/Decr	Recommended
Full Time Equivalent Employees	10.48	10.48	10.48	10.48	10.48	10.48
Personal Services	303,524.06	337,338	337,257	338,027	336,691	337,462
Operating Expenses	101,793.52	59,518	60,330	81,078	61,500	81,949
Equipment	75.00	0	0	0	0	0
Total Agency Costs	\$405,392.58	\$396,856	\$397,587	\$419,105	\$398,191	\$419,411
General Fund	177,798.51	181,063	181,434	181,434	181,740	181,740
Federal Special Revenue Fund	227,594.07	215,793	216,153	237,671	216,451	237,671
Total Funding Costs	\$405,392.58	\$396,856	\$397,587	\$419,105	\$398,191	\$419,411

## Overview

The Office of Public Instruction is responsible for managing federal Carl D. Perkins Vocational Education Act activities at secondary schools, Job Training Partnership Act state education coordination activities, the Targeted Job Tax Credit program, and state Vocational Education funds under HB 518 of the 1981 session. With funding from these federal and state programs, the OPI provides grants to schools, community-based organizations, units of the university system, state agencies, and others for vocational education and job training programs.

At least 80 percent of the JTPA funds which OPI receives must be passed-through to state and local agencies as State Education Coordination Grants. These grants fund classroom training that is designed, when coordinated with on-the-job training, to prepare youth and adults for entry into the labor force and afford job training to economically disadvantaged individuals and others facing serious barriers to employment.

As part of its vocational education functions, OPI has a contract with the Board of Regents to manage post-secondary youth organizations, including Vocational Student Organizations of Future Farmers of America, Distributive Education Clubs of America, Business Professionals of America, Future Home Makers of America/Home Economics Related Organizations, and Vocational Industrial Clubs of America. This contractual arrangement was mandated by House Bill 39 (L. 1987).

## Goals

To provide policy direction and technical assistance to agencies providing vocational education and job training programs.

To provide leadership in developing vocational programs to reflect state-of-the-art technology, safety practices, and instructional concepts.

To facilitate coordination of education and job training services through negotiation of cooperative agreements, dissemination of program information, training of program providers, and sponsorship of training support services with statewide impact in order to improve available services and minimize unnecessary duplication.



## Authorization

Federal/State Statute or Regulation	Title and Description
P.L. 98-524	Carl D. Perkins Vo-Ed Act.
34 CFR Parts 401, 407, through 412, and 414 through 417	Federal Vo-Ed Regulations.
34 CFR Parts 74 through 79	Education Department General Administrative Regulations.
P.L. 97-300	Job Training Partnership Act.
20 CFR Parts 634 through 684	Implementing Regulations for Programs under JTPA.
26 CFR	Implementing Regulations for the Targeted Jobs Tax Credit of the Internal Revenue Code.
P.L. 99-519	Asbestos School Hazard Abatement Act of 1984.
40 CFR Parts 702 to 799	Federal Asbestos Regulations for Schools.
29 CFR Parts 31 and 32	Equal Opportunity and Nondiscrimination.
P.L. 94-467, 97-129, 98- 80, 98-620, 99-419, 100- 418, 100-551	Toxic Substance Control Act.
40 CFR Parts 702 through 799	Toxic Substance.
MCA 20-7-301	Duties of the Superintendent of Public Instruction (Vo-Ed).
MCA 20-7-302	Duties of the State Director of Vocational Education.
MCA 20-7-303	Authorization to Establish and Maintain Vocational Education Courses and Programs.
MCA 20-7-305 and 306	Funding for Secondary Vo-Ed Programs.
ARM 10.44.101 through 107	State Administrative Requirements Vo-Ed.
ARM 10.44.201	General Requirements Vo-Ed.
ARM 10.44.202 through 210	Special Requirements for Vo-Ed Programs.

MCA 75-2-502 and 503	Asbestos Control.
40 CFR Part 763	Asbestos in Schools.
Federal radon gas legislation pending	
Asbestos rules of Montana pending	
P.L. 97-300 (as amended)	Job Training Partnership Act (Section 123 - State Education Coordination Grants).
20 CFR 626	Introduction to Regulations Under the Job Training Partnership Act.
20 CFR 627	State Responsibilities Under the Job Training Partnership Act.
20 CFR 629	General Provisions Governing Programs Under Titles I, II, and III of the Job Training Partnership Act.
20 CFR 630	Programs Under Title II of the Job Training Partnership Act.
MCA 53-2-1110	Coordination of Job Training and Employment Programs - Review of Job Training Plans.
29 CFR 31	Equal Opportunity in Employment in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.
29 CFR 32	Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.
P.L. 98-524 (as amended)	Carl D. Perkins Vocational Education Act - Coordination with programs under the Job Training Partnership Act.
34 CFR 401.19	Assurances of coordination with programs under the Job Training Partnership Act.

## Base Program

OPI provides administrative, policy, fiscal, and programmatic direction to vocational education agencies. It is the responsibility of the Office of Public Instruction to insure that all projects and activities receiving vocational education funds are operated in compliance with federal and state laws.

Under the JTPA program, the staff provides overall policy direction, program management, and fiscal management to six to fourteen direct service programs operated by local education agencies, community-based organizations, and state social service agencies. Funds for these direct service programs flow through to local program operators,

and require a dollar-for-dollar cash or in-kind local matching contribution.

Policy direction and program management are provided by professional staff, with assistance of support staff. Policy direction involves negotiation with the State Job Training Coordinating Council and private industry councils in each JTPA service delivery area, and consultation with the State Council on Vocational Education and other interested parties. This activity requires professional staff attendance at approximately twenty meetings per year.

Program management involves soliciting program providers, contracting for services, technical assistance to program providers, monitoring each program provider annually to



assess compliance with applicable laws and regulations, evaluating program performance and reporting findings, and recommending program modifications.

Fiscal management involves subgrant and contract management, monitoring expenditures and matching contributions monthly, evaluating fiscal progress and recommending program modifications, providing technical assistance to program providers, disbursing flow-through funds to program providers monthly, and reporting aggregate expenditures to grantor agency monthly.

### Base Funding

Funding for the administration of Vocational Education is provided partially from Federal sources via PL 98-524 and PL 97-300 and from the State General Fund. Both Federal acts require matching funds. The required match for administration is a 50% cash match.

Total funding for JTPA (Education Coordination) is provided through a subgrant from the Montana Department of Labor and Industry. Funding is a direct function of federal appropriation by Congress and formula allocation to states. Funding is not expected to exceed \$610,000 in either FY92 or FY93 for both direct services and coordination facilitation. Current appropriation and allocation trends indicate that total annual funding may fall to \$545,000 or less in FY92 and FY93.

### Performance Indicators

#### Vocational Education

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Workshops Offered	20	30	30	20
State Conference Held	10	10	10	10
Technical Assistance Calls	25918	26000	26000	26000
Career Success Magazine	28000	28000	28000	28000
Teacher Organizations Served	6	6	6	6
Handicapped Projects	36	40	40	40
Handicapped Served	715	750	800	850
Disadvantaged Projects	55	60	65	70
Disadvantaged Served	2192	2250	2350	2500
LEP Programs	2	3	4	5
LEP Served	50	75	100	125
Adult Programs	31	35	35	35
Adults Served	2800	3200	3200	3200
Apprenticeship Programs	15	15	15	15
Apprentices Served	250	250	250	250
Single Parent Projects	3	5	6	6
Single Parents Served	80	90	100	100
Sex Equity Projects	4	8	10	12
Students Served in Sex Equity	120	250	300	350
Criminal Offender Programs	2	2	2	2
Offenders Served CDP Title II	60	60	60	60
Students Served	13645	14000	14500	15000
Consumer Home-Ec Students Served	2444	2500	2600	2600
CDP Title I Students Served	3110	3200	3300	3300
Agriculture Ed Programs	69	70	75	75
Agriculture Ed Students Served	3164	3200	3300	3300
Business Ed Programs	126	130	135	135

# **Increase or Decrease to Base**

## Revenue Adjustment

The "incr/decr" columns in the table on page 38 include a base adjustment of \$21,518 in FY92 and \$21,220 in FY93. This adjustment, specifically allowed by the Governor's budget instructions, transfers authority between "activities" within the Educational Services Program. It does not represent an increase in the Office of Public Instruction's total budget.

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Business Ed Students Served	6052	6300	6500	6500
Marketing Programs	17	20	20	20
Marketing Students Served	1821	2000	2000	2000
Home Economics Programs	121	130	140	150
Home Economics Students Served	7594	8000	8400	8800
Technology Education	91	100	120	140
Technology Ed Students Served	6278	7000	7800	8600
Trade and Industrial Programs	43	50	50	50
Trade Students Served	3890	4200	4200	4200
Co-op Students Served	250	300	300	300
Public Hearings Conducted	12	1	12	12

## **JTPA**

<u>Workload Measure</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Contracts Negotiated	15	15	15	15
Projects Evaluated	15	15	15	15
Corrective Action Plans	5	4	4	4
Participants Served	662	600	600	600
Public Hearings Conducted	8	2	8	2
Workshop Presentations	5	6	6	6



## TITLE IV

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	2.50	2.50	2.50	.50	3.00	2.50	.50	3.00
Personal Services	65,237.08	73,724	73,711	16,496	90,207	73,522	16,458	89,980
Operating Expenses	138,532.52	208,476	209,113	-83,840	125,273	210,280	-88,680	121,600
Equipment	11,363.41	0	0	3,300	3,300	0	1,200	1,200
Grants	14,796.01	0	0	20,800	20,800	0	26,800	26,800
<b>Total Agency Costs</b>	<b>\$229,929.02</b>	<b>\$282,200</b>	<b>\$282,824</b>	<b>\$-43,244</b>	<b>\$239,580</b>	<b>\$283,802</b>	<b>\$-44,222</b>	<b>\$239,580</b>
Federal Special Revenue Fund	229,929.02	282,200	282,824	-43,244	239,580	283,802	-44,222	239,580
<b>Total Funding Costs</b>	<b>\$229,929.02</b>	<b>\$282,200</b>	<b>\$282,824</b>	<b>\$-43,244</b>	<b>\$239,580</b>	<b>\$283,802</b>	<b>\$-44,222</b>	<b>\$239,580</b>

## Overview

The Department of Education provides grants to the state education agency to provide technical assistance, training, and/or resources to assist school districts, personnel and communities in identifying and serving linguistically and racially diverse students, and eliminate gender discrimination in compliance with state and federal laws and regulations.

## Goals

Educational disparity occasioned by national origin, gender, and race will be reduced in Montana school districts through implementation of the Title IV grant.

## Authorization

Federal/State Statute or Regulation	Title and Description
P.L. 88-352	Title IV and Title IX of the Civil Rights Act of 1964.
CFR 75.2-75.217	State Educational Agency Desegregation Program.
P.L. 92-318	Technical assistance for desegregation of public schools.
Article X, Section 1	Guarantee of equality of educational opportunity and the American Indians.

49-2-307, MCA  
 10.55.109, ARM  
 10.55.802, ARM  
 10.55.803(b), (c) and (h), ARM  
 10.55.1601(g), ARM  
 Ridgeway Settlement Agreement, 1984

Freedom from discrimination in education.  
 Accreditation Standard prohibiting discrimination by any district.  
 Accreditation Standards - Opportunity and Educational Equity.  
 Accreditation Standards - Learner Access Native American needs, cultural differences, special needs.  
 Accreditation Standards - Nurture understanding of Native American cultures.  
 District Court order requiring sex equity in sports and related activities.

### Base Budget

Federal technical assistance grants are provided to the Office of Public Instruction to assist local education agencies and teachers throughout the state who serve minority students and students of diverse language backgrounds or national origin. The National Origin program anticipates a change in staffing for fiscal 1991 which will allow the workload to increase to meet demographic projections of increased limited-English-proficient students in Montana.

Training and resources are provided to districts to assist in eliminating gender discrimination. A gender specialist was hired in January of 1990 in a renewed commitment to the program, and the workload measures will increase through fiscal 1992. A "remedial plan" is being developed and implemented in compliance with the Ridgeway Settlement Agreement on sports equity.

### Base Funding

This program is funded 100% by the federal government under P.L. 88-352 and Title IV Desegregation Technical Assistance Grants.

### Performance Indicators

Workload Measures No. of workshops/ conferences	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
18	18	18	18	18
No. of individual student programs designed	52	52	52	52

Workload Measures	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
Consultations with districts	50	70	70	70
Proposals researched/ written	4	4	4	4
Reports/newsletters prepared and disseminated	5	5	5	5
Response to requests for information/ visits/assistance	295	395	420	420
Teacher Training Sessions	14	15	17	17
Public Forums/ Regional Training Events	5	9	16	16

### Increases and Decreases to Base

#### Revenue Adjustment

The "incr/decr" columns in the table on page 43 include a base adjustment of \$(68,244) in FY92 and \$(69,222) in FY93. This adjustment, specifically allowed by the Governor's budget instructions, is a transfer of authority between "activities" within the Educational Services Program. It does not represent a decrease in the Office of Public Instruction's total budget.

#### Race Equity

The Race Equity grant provides funding for technical



assistance to schools on or near Indian reservations and those that have other minority children enrolled. This grant allows the OPI to provide services to approximately 14,000 school age Indian children as well as their parents, teachers, school boards and administrators. The grant award for FY92-93 is expected to increase \$25,000 over current level.

#### FUNDING REQUESTED:

	FY92	FY93
<b>Federal Funds</b>	<b>\$25,000</b>	<b>\$25,000</b>

#### National Origins

The Title IV Civil Rights grant to OPI provides current level funding in the amount of \$232,000 for technical assistance to school districts in the areas of gender, national origin and race desegregation. This grant as approved includes a 1 FTE specialist in the area of National Origins, but current level funding is for .5 FTE and 20 hours per week contracted services. In order to comply with the grant as approved by the Department of Education, and to comply with State and Federal guidelines regarding the designation of an individual as an employee vs. a contractor, an additional .5 FTE is requested to replace the contractor.

#### FUNDING REQUESTED:

	FY92	FY93
<b>FTE</b>	<b>0.50</b>	<b>0.50</b>

#### Gender Equity

As a result of Ridgeway vs. Montana High School Association, et al., OPI is under federal court order to perform certain activities related to gender equity each year in all school districts in Montana. Documentation of the court order is available in Gender Equity Office or OPI Legal Services. Specific court ordered actions charge that OPI shall:

- provide to the school districts in Montana technical assistance in self-evaluation and self-improvement in providing sex equity in athletics;

#### Local School District Activities -

continue to respond to questions on issues of equity and shall continue to provide interpretations of state

and federal law pertinent to school districts, school personnel office and trustees throughout the state of Montana;

continue to distribute sex equity materials such as handbooks, policies, new articles, and other vital information which is important for a school district in maintaining compliance;

continue to distribute materials such as sex equity handbooks, examples of school board policies, grievance procedures, etc. to any requesting school district and/or will inform school districts of developments regarding equity laws;

continue to provide the following workshops to school districts, county superintendents and administrators on an "as needed" basis, pending federal funding;

- 1) The Cost of Sex Bias in the Classroom
- 2) Teacher-Student Interaction
- 3) Evaluating Textbooks for Bias
- 4) Women in History
- 5) Career Awareness
- 6) Myth and Reality of Women Workers
- 7) Math Anxiety

continue to provide the following statewide workshops, pending federal funding;

- 1) Women Interested in School Administration
- 2) Sex Equity in Athletics
- 3) Technology's Implications for Education

#### State Level Activities -

continue its in-house committee on equity to assure that all publications are free from sex bias and are in compliance with the law;

provide districts with handbooks on equity and self-evaluation;

continue to provide in-house workshops and inservice for all Office of Public Instruction specialists on sex equity and how to provide technical assistance to schools;

continue to maintain a Human Potential Specialist (sex equity) in the Department of Vocational Education, pending availability of federal funding;

OPI's legal counsel shall continue to train county superintendents as hearing officers pursuant to the Rules of Controversy, concentrating immediate attention on sex equity issues.

Federal funds have been cut gradually over the last several years so that none of these court-ordered activities have been funded. In order to avoid litigation and other court requirements against OPI and the state, state funding must be budgeted to begin fulfilling these court mandated programs.

These funds will be used to pay the salary, benefits and operating expenses associated with hiring a .50 administrative assistant, and to pay the cost of conducting a court-ordered conference for approximately 100 school administrators and teachers each year.

**FUNDING REQUESTED:**

	<u>FY92</u>	<u>FY93</u>
<b>FTE</b>	<u>0.50</u>	<u>0.50</u>
<b>General Fund</b>	<b>\$27,588</b>	<b>\$27,588</b>



## 35010611.980

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr	----- Recommended	----- Base	Fiscal 1993 Incr/Decr	----- Recommended
Full Time Equivalent Employees	25.82	30.92	25.82	5.50	31.32	25.82	5.50	31.32
Personal Services	753,757.97	884,776	801,447	160,677	962,124	800,389	160,311	960,700
Operating Expenses	917,394.90	782,508	757,757	477,761	1,235,518	761,124	480,826	1,241,950
Equipment	81,191.11	19,803	55,257	13,414	68,671	55,257	9,146	64,403
Local Assistance	14,050.86	0	0	0	0	0	0	0
Grants	0.00	0	0	90,000	90,000	0	90,000	90,000
Total Agency Costs	\$1,766,394.84	\$1,687,087	\$1,614,461	\$741,852	\$2,356,313	\$1,616,770	\$740,283	\$2,357,053
General Fund	450,900.29	525,365	446,066	111,415	557,481	448,375	108,814	557,189
State Special Revenue Fund	297,483.45	284,475	284,475	12,500	296,975	284,475	13,532	298,007
Federal Special Revenue Fund	1,018,011.10	877,247	883,920	617,937	1,501,857	883,920	617,937	1,501,857
Total Funding Costs	\$1,766,394.84	\$1,687,087	\$1,614,461	\$741,852	\$2,356,313	\$1,616,770	\$740,283	\$2,357,053

## Overview

This activity contains 17 educational programs. With the exception of the GED testing program and audiology services, the programs are funded all, or in the majority, by federal funds or state special revenues. Major activities included in this program are: School Foods, Certification, Accreditation, Audiology and Traffic Safety. Numerous federal programs such as AIDS, drug free schools, veterans education, and the McKinney homeless children are also included.

## Goals

The major goals of this program are to 1) guarantee quality schools, teachers and administrators through management of the accreditation/certification process and 2) ensure the federal funds are utilized, in accordance with the funding restrictions, to improve the educational opportunities for Montana school children and adults. By aggressively seeking federal funding we can continue to improve the quality of educational opportunity while holding down state expenditures.

## Authorization

### Federal/State Statute or Regulation

### Title and Description

Title 38, U.S.C.

Veterans Benefits, Chapters 30, 32, 34, 35 (Montgomery G.I. Bill/Active Duty).

Title 10. U.S.C.

Educational Assistance for Members Chapter 10 of the Selective Reserve.

P.L. 100-323

Veterans Employment Training and Counseling Amendments of 1988.

P.L. 93-638

Indian Self-Determination and Educational Assistance Act of 1975 (Public Law 93-638 88 Stat.2203).

P.L. 100-297

Augustus F. Hawkins - Robert and Stafford Title II Elementary and Secondary School Improvements 1988-Title II - Mathematics and Science Education Programs Reauthorized as the Dwight D. Eisenhower Mathematics and Science Education Act.

P.L. 100-297

Augustus F. Hawkins - Robert and Stafford Title III Elementary and Secondary School Improvements 1988-Title III - Adult Education Programs.

Federal Register

August 18, 1989  
Education; Part VIII  
34 CFR Part 425, et al.

State-Administered Adult Education Programs and Secretary's Discretionary Programs for Adult Final Regulations.

P.L. 100-77

Stewart B. McKinney Homeless Assistance Act Title VII, Subtitle B - Education of Homeless Children and Youth.

EHA 20 USC

Requires that services provided for handicapped Section 1400-1485 children be rendered by qualified professional staff in each individual discipline.

P.L. 99-570

Drug-Free Schools and Communities Act of 1986.

P.L. 100-297

Amendments of 1988.

P.L. 100-690

Amendments of 1989.

Title IV, Part A,  
Subpart 6, Higher

Senator Robert C. Byrd Honor Scholarship Program.

Education Amendments,  
1986 as amended

13.118

Catalogue of Federal Domestic Assistance.

Federal Law

Public Health Service Act [Section 301(a)] (42 USC 241 (a) as amended) Public Health Service Act [Section 311 (b and c)] (42 USC 243(b) as amended).

CFDA:84.073C

National Diffusion Network: State Facilitator Project.



P.L.100-297

Augustus F. Hawkins - Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988.

CFR Part A  
548.1-548.4

Bilingual Education: State Educational agency Program.

P.L. 100-297

Augustus F. Hawkins - Robert T. Stafford Elementary and Secondary School Improvements of 1988.

34 CFR  
Parts 76,77, and 298

Federal, State, and Local Partnership for Educational Improvement.

34 CFR Part 81

General Education Provisions Act - Enforcement; Notice of Proposed Rule making.

20-3-106

Supervision of schools - powers and duties.

20-4-101

System and definition of teacher and specialist certification.

20-4-102

Board of Public Education Policy.

20-4-103

Issuance of teacher of specialist certificate.

20-4-108

Terms of teacher and specialist certificates -renewal.

20-4-110

Suspension, revocation, and denial of certificate - appeals.

20-4-111

Emergency authorization of employment.

20-4-121

Interstate agreement on qualification of educational personnel.

20-4-122

Designated official for purposes of interstate agreement.

20-4-123

Preservation and publication of contracts made pursuant to interstate agreement.

20-3-106

Supervision of schools - powers and duties.

20-4-106

Classification of teachers and specialist certificates.

220-7-101

Standards of Accreditation.

20-7-102

Accreditation of schools.

20-10-20

Acceptance, expenditure, and administration of federal school food service monies.

20-7-502

Duties of the Superintendent of Public Instruction;

20-7-503

District establishment of a Traffic Education Program;

20-7-504

State Traffic Education Account - proceeds earmarked for the account;

20-7-506

Annual allocation and distribution of Traffic Education Account proceeds - allocation for

20-7-201	state administration;
	Libraries. Authority of Superintendent of Public Instruction in maintenance and operation of library.
20-3-106-24	Responsibility of Superintendent of Public Instruction.
20-7-712	Adult Basic Education Fund and its Distributors.
20-7-131	Equivalency of completion of secondary education.
20-2-121	Board of Public Education-rules (#10).
ARMS 10.66.101	Regulations/rules established for GED Testing Program in Montana and authority for issuance of high school equivalency certificates.
- 10.66.106	
20-7-403(13)	Requires that the Superintendent of Public Instruction supervise and coordinate the conduct of special education in the state by contracting for the delivery of audiological services to those children allowed by law in accordance with policies of the Board of Public Education.
20-9-603	Requirement for the Superintendent to apply for accept federal funds.
20-10-202	Records, reports, reviews and Audits.
20-10-203	School food commodities.
20-10-204	Duties of trustees.
20-10-205	Allocation of federal funds to school food services fund for federally connected, indigent pupils.
20-10-206	Pupils in state institutions included.
20-10-207	School Food Services Fund.
Sec. 2-12, 60	National School Lunch Program.
Stat.230	
Child Nutrition Act	School Breakfast Program, Special Milk Program.
Sec. 326 of P.L. 99-500 and 99-591, P.L. 97-35 P.L. 96-499, P.L. 95-627, P.L. 95-166, P.L. 91-248	Summer Food Service Program.



Nutrition Education and Training Program.  
Food Distribution.

P.L. 95-166  
P.L. 74-320  
P.L. 75-165,  
P.L. 79-396,  
P.L. 81-439,  
P.L. 91-665,  
P.L. 84-540  
P.L. 85-931;  
P.L. 86-756  
P.L. 89-321,  
P.L. 90-302,  
P.L. 93-288,  
P.L. 93-326,  
P.L. 94-105,  
P.L. 95-113,  
P.L. 95-478,  
P.L. 95-627,  
P.L. 99-198,  
P.L. 100-237

State Administrative Expense Funds.

Stat. 885, 886, 889, Determining Eligibility for Free and Reduced Price Meals and Free Milk.

Base Program

The major emphasis of this program is improving the quality of instruction and, accordingly, the educational opportunity for Montana school children and adults. Activities are specifically defined by Board of Public Education policy or in the applicable federal law or regulation. The majority of staff time spent on these projects consists of training teachers and administrators through workshops, assisting in curriculum development at the schools, assessing student needs through various assessment tools and district surveys and setting up demonstration projects.

Base Funding

Traffic Safety and Advanced Drivers Education are funded with State Special Funds. Pupil Transportation Safety, Audiology, and GED are funded from the General Fund. The Audio Visual Library is funded from State Special funds, the General Fund and Federal Chapter 2 monies. The School Food Cooperative Purchasing Program is funded from State Special funds. The Federal School Foods Grant requires a General Fund match for administration expenses of \$67,277. The remaining activities in this program are federally

funded.

Performance Indicators

Workload Measures	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
Average daily lunches served	77,546	77,546	77,546	77,546
A.V. Library bookings	10,000	11,000	11,000	11,000
G.E.D. certificates issued	1,800	1,800	1,800	1,800
Professional certificates	5,500	5,500	5,500	5,500
Audiology screenings	68,197	68,197	68,197	68,197
Medical referrals	4,530	4,530	4,530	4,530

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Complete evaluations	3,525	3,525	3,525	3,525
Scholarships awarded	17	17	17	17
Workshops conducted	147	147	147	147
Programs reviewed	468	697	643	783
People served	18,242	19,650	19,650	19,650
Technical assistance contacts	38,685	39,410	39,410	39,410
Math/Science teachers impacted	2,615	2,615	2,615	2,615

## **Increases and Decreases to Base**

### Revenue Adjustment

The "incr/decr" columns in the table on page 47 include a base adjustment of \$59,604 in FY92 and in FY93. This adjustment, specifically allowed by the Governor's budget instructions, transfers authority between "activities" within the Educational Services Program. It does not represent an increase in the Office of Public Instruction's total budget.

### Audiology

The Office of Public Instruction has been notified that the U.S. West Grant for audiological services in Montana will not be awarded for FY 92 and FY 93.

This will result in a shortfall to the hearing conservation program of approximately \$136,000 per year. The Governor's Office has approved \$68,000 in general fund each year with the expectation we will raise \$68,000 in private contributions each year. The office needs the appropriation authority for the private contributions.

### **FUNDING REQUESTED:**

	<u>FY92</u>	<u>FY93</u>
<b>General Fund</b>	<b>\$68,000</b>	<b>\$68,000</b>
<b>State Special Revenue</b>	<b>\$68,000</b>	<b>\$68,000</b>

At Risk Child Intervention  
Early Childhood Intervention Services are becoming an

important issue in the public schools. Studies are indicating that early support for children who are environmentally at risk of experiencing cognitive delays can significantly reduce future need for special education and resource programs. No agency currently offers these services.

OPI currently provides services to 2,445 children aged birth through 6 years old under the accepted definition of "handicapped". Early intervention services provided by education will be identification of children "at risk" for delays and early education for preschool aged children who are experiencing educational delays due to environmental factors.

Indian Health Programs suspect 35% to a high of 45% of children born on Reservations being at risk for cognitive delays. Paired with the suspected figure of 18% of all children in Montana are experiencing delays due to environmental factors, OPI may be able to identify as many as 6,000 children under age 5 who would benefit from early identification and support services. A 30% decrease in the need for resource and special education programs to these children in the first through sixth grade may be realized if early intervention services are implemented.

In order to better specify the population to be served by Early Intervention services in OPI it will be necessary to develop a definition of "At Risk" that will serve the largest portion of identified children in the most cost effective manner. A 1.00 FTE (grade 16) will be required to write a definition of the population to be served and prepare a cost analysis of the definition (including current costs of the program and projected savings in Adult Basic Education Services, Job Programs, GED and to elementary resource programs), develop and monitor an expanded Child Find program during the first year of the program, monitoring child find, training specialists and developing or locating an instrument to identify "at risk" children. Travel may be necessary up to 12 times yearly. This FTE may also be required to serve as staff to a federal advisory council and work cooperatively with other agencies now providing some services to children who would benefit from Early Intervention services.

The U.S. Congress is currently considering legislation in the Education and Labor Committee of the House to provide federal funding for support to child care providers, public and private prekindergarten programs through the local education department. If this legislation becomes law, rules and regulations governing the federal funds may



decrease the cost of this program to the General Fund. The President's National Education Goals, recommends early identification and education for "at risk" children aged 4 and up. Headstart programs will be expanded to meet the needs of some children currently identified as below the poverty level, but early identification of children considered "at risk" for educational delays can include:

Children whose parents are either Developmentally Disabled or with Severe and Persistent Mental Illness and,

Children who have been previously unidentified as Mentally Ill or Emotionally Disturbed,

Children who may be identified later as Learning Disabled.

#### FUNDING REQUESTED:

FTE	FY92	FY93
General Funds	1.00 \$41,213	1.00 \$38,787

#### Cooperative Food Purchase

The School Foods Division Cooperative Food Purchase Program has grown consistently since at least December 1987 and is expected to continue to grow at a rate of 3 percent each year.

School Districts choosing to participate in the Cooperative Food Purchase program are assessed an administration fee equal to 2% of their purchases. These fees are deposited into the State Special Revenue Fund and are used to pay salaries, benefits and operating expenses associated with the program. As the program grows, so do the costs of administration.

This is a request to increase current level spending authority to equal the amount of administrative fees expected to be collected during the next biennium.

#### COOPERATIVE FOOD PURCHASE HISTORY

Date of Bid	Total Bid	Administrative
December 1987	\$ 480,468	\$ 9,609
September 1988	715,156	14,312
December 1988	510,280	9,962
September 1989	958,782	19,382
December 1989	694,566	13,976
	\$3,359,253	\$67,243

The September bid is the largest bid each year. The December bid typically decreases in volume and dollars.

#### FUNDING REQUESTED:

State Special Revenue	FY92	FY93
	\$12,500	\$13,532

#### Bicentennial Competition

OPI has received funding from the Center for Civic Education for the past four years. Prior to FY90 this funding was not deposited in the state treasury and accounted for through SBAS. In FY90, the Office of Public Instruction requested and received a budget amendment for this activity. There is no state or federal funding given OPI for this program.

The program provides curriculum materials and assistance for competition expenses involved in the study of the Constitution and the Bill of Rights. The program is co-sponsored by the Commission on the Bicentennial of the United States Constitution and funded by an Act of Congress. Montana receives direct funding from the Center for Civic Education.

#### FUNDING REQUESTED:

Federal Funds	FY92	FY93
	\$7,500	\$7,500

#### School Foods

In order for the School Foods Division to meet USDA program requirements in the areas of compliance monitoring, special assistance, training and administration it is necessary for the division to contract for services or hire additional staff. A management evaluation of the OPI School Foods Division conducted by the USDA Regional Office in October 1989 resulted in a report recommendation that an additional specialist be hired.

The division has a .50 FTE Grade 16 School Food Service Specialist. An additional .50 FTE will allow the division to hire a full-time specialist, rather than hiring a half-time specialist and contracting for the other half. Current level federal funding for this program is adequate to pay the additional personal services costs.

#### FUNDING REQUESTED:

FTE	FY92	FY93
	0.50	0.50

Nutrition Education Training (NET) Grant

Additional money has been authorized by the federal government for the Division of School Food's NET program. PL 101-147 extends NET through 1994 and allows for gradual restoration of funds. As a minimum grant state, Montana's NET grant will increase from the current level of \$50,000 to \$62,500 in 1992-93.

This increase in federal funds will be used to provide additional nutrition education training workshops.

**FUNDING REQUESTED:**

<b>Federal Funds</b>	<u>FY92</u>	<u>FY93</u>
	\$12,500	\$12,500

Drug Free Schools

The Drug-Free Schools and Communities Act of 1986 provides financial assistance to states to help local schools with kindergarten through 12th grade (K-12) drug prevention programs.

This is a request to continue the .50 budget amendment FTE and add a 1.00 FTE education specialist and a .50 support person to work in the Drug Free program and increase current level authority of \$50,000 to the anticipated amount of the Drug Free grant award for FY92-93. The additional 1.50 FTE will be 100% federally funded and are needed due to:

1. expansion of drug-free schools and communities grant requirements,
2. additional responsibility for monitoring of local education agencies' work plans,
3. additional number of schools enrolled in the drug-free program and,
4. expansion of technical assistance duties such as workshops, inservices, materials development and distribution, and review of special project funding requests from local education agencies.

The additional grant monies will be used to carry out mandated services as well as provide technical assistance to Montana's schools.

**FUNDING REQUESTED:**

<b>Federal Funds</b>	<u>FY92</u>	<u>FY93</u>
<b>FTE</b>	\$132,490 2.0	\$132,490 2.0

AIDS Education

The Federal Center for Disease Control (CDC) provides 100 percent of the funds to staff and operate OPI's AIDS Education program. The AIDS Education program was established to increase the level of AIDS-related knowledge among Montana's students, school decision-makers, and teacher education candidates.

The AIDS grant award for FY90 was \$77,000 higher than current level. OPI requested and received a budget amendment to spend the additional \$77,000 and added 1.50 FTE to the AIDS staff. The additional staff are needed to meet existing and on-going services and responsibilities, to respond to increased demands for technical assistance, to increase program accountability for expanded grant requirements, and to monitor local education agencies' work plans. If approved, this request will continue the federally funded 1.50 FTE as current level in FY92-93.

We expect the AIDS grant award for FY92-93 to increase by \$99,000 over current level. The additional funds will be used to pay the salary, benefits, and operating expenses associated with the 1.5 FTE.

**FUNDING REQUESTED:**

<b>Federal Funds</b>	<u>FY92</u>	<u>FY93</u>
<b>FTE</b>	\$99,000 1.5	\$99,000 1.5

Bilingual Grant

Federal law now allocates a minimum of \$75,000 to State Education Agencies for administration of the Title IV Bilingual grant, an increase of \$25,000 over the current level allocation of \$50,000. The money will be used for salary, benefits and operating expenses associated with hiring an additional .50 specialist. The specialist will collect data and provided technical assistance to Local Education Agencies (LEA) regarding limited English proficiency students.

**FUNDING REQUESTED:**

<b>Federal Funds</b>	<u>FY92</u>	<u>FY93</u>
<b>FTE</b>	\$25,000 0.50	\$25,000 0.50



## At-Risk Students

The Office of Public Instruction can expand the "at-risk" programs throughout the state through the program offering demonstration projects, training and conferences. Montana's rural schools lack access to programs and services that assist in dealing with at-risk students. National studies show that students who drop out of high school cost society more--both in increased welfare and social service costs and in lost human potential. For each \$1 spent on "at-risk" programs, \$7 to \$12 could be saved in social service and custodial costs.

Throughout Montana and the nation, new efforts are being made to help "at-risk" children stay in school. "At-risk" children are those that are experiencing trouble in school, have home situations that hinder learning, have substance abuse problems, or have other problems which make them likely to drop out of school. The eight largest school districts in the state have instituted "at-risk" programs. However, in Montana's many smaller schools, there is no program to assist these youths in staying in school.

At a relatively low cost, OPI can expand "at-risk" programs throughout the state through the following program:

1. Demonstration Projects--\$10,000. OPI would solicit request for proposals from districts for a two-year "at-risk" demonstration project involving 15 to 150 students. OPI would select from each of three regions of the state (west, central, and eastern) and fund up to \$3,333 for each for first year. (The district would guarantee funding for the second year.) This "seed money" approach would allow districts to demonstrate to trustees, parents and the community the value of the program and provide demonstration sites for other districts.

2. Training and Conferences--\$10,000. OPI would further increase knowledge about the "at-risk" programs OPI would further increase knowledge about the "at-risk" programs by holding annual conferences and training sessions in the three regions of the state (east, central and west). OPI would arrange for nationally recognized experts on this topic to work with teachers and counselors on recognizing "at-risk" students and implementing strategies to keep them in school. In addition, districts that had successful demonstration projects could share their experiences with other districts at these conferences.

This program would not require additional staff. Existing staff funded under another federal program would devote quarter time to organizing the conferences and overseeing the demonstration projects. The staff would also seek federal grants and funding from other programs to augment this effort.

### FUNDING REQUESTED:

	<u>FY92</u>	<u>FY93</u>
General Fund	\$33,059	\$33,059

### OTHER ISSUES

#### Full Time American Indian Education Specialist

Montana has a Constitutional requirement to preserve Native American cultural integrity and provide equality of educational opportunity. To date we have not made a general fund financial commitment to implement that requirement.

### FUNDING REQUESTED:

	<u>FY92</u>	<u>FY93</u>
FTE	0.50	0.50
General Fund	\$24,071	\$23,997

#### Advanced Drivers Education

The Department of Administration Accounting Bureau, has recommended in a report to the Legislative Finance Committee that the fund balance in this account be transferred to the General Fund.

Funding for the Advanced Drivers Education program is from **user fees** and "**specific use**" **highway traffic safety monies** received through the Department of Justice. No State General Fund money has ever been appropriated to this program, which is in its twelfth year of operation.

Presently this program is experiencing an annual \$15,000 shortfall of revenue versus expenditures. Without an additional revenue source, our "**unobligated fund balance**" will be consumed in four years or less for this reason alone. Following are several additional reasons why this fund balance should not be transferred to the General Fund.

1. The balance of the Advanced Drivers Education Account was purposely accumulated over the past several

years to permit this program to add, replace and upgrade the Advanced Driver Education facility and equipment located in Lewistown over a five year period. The 1989 Legislature appropriated \$25,000 to the Office of Public Instruction from the accumulated fund balance to make facility improvements in FY90.

2. Since this is a self supporting operation, it would not be prudent to operate without a reserve for facility/equipment replacement, unexpected repairs, and for unanticipated revenue shortfalls. This program is equipment/facility dependent and for safety reasons, maintenance of the facility and the equipment cannot be delayed.

3. Since 1981 the Highway Traffic Safety Division has provided over \$160,000 of federal highway safety program funds to support the training of a variety of safety personnel in this program. Although these funds came to the Office of Public Instruction from the State's Department of Justice, the monies that make up the Advanced Drivers Education account fund balance are federal dollars. (Refer to the Federal Register, Vol.53, No. 48, Friday, March 11, 1988 which states, "program income shall be used for the purposes and under the conditions of the grant agreement.") This then restricts and effectively earmarks these monies for Montana Advanced Driver Education Program use only.



# MOTORCYCLE SAFETY

35010612.980

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr	----- Recommended	----- Base	Fiscal 1993 Incr/Decr	----- Recommended
Full Time Equivalent Employees	1.33	1.33	1.33	.00	1.33	1.33	.00	1.33
Personal Services	22,988.00	34,533	34,524	78	34,602	34,445	78	34,523
Operating Expenses	33,704.43	52,467	47,040	-3,078	43,962	47,365	-3,078	44,287
Equipment	2,857.00	0	0	3,000	3,000	0	3,000	3,000
<b>Total Agency Costs</b>	<b>\$59,549.43</b>	<b>\$87,000</b>	<b>\$81,564</b>	<b>\$0</b>	<b>\$81,564</b>	<b>\$81,810</b>	<b>\$0</b>	<b>\$81,810</b>
State Special Revenue Fund	59,549.43	87,000	81,564	0	81,564	81,810	0	81,810
<b>Total Funding Costs</b>	<b>\$59,549.43</b>	<b>\$87,000</b>	<b>\$81,564</b>	<b>\$0</b>	<b>\$81,564</b>	<b>\$81,810</b>	<b>\$0</b>	<b>\$81,810</b>

## Overview

The Motorcycle Safety Program is mandated by law to work with government and private agencies to promote safety and awareness in the operation of motorcycles through motorcycle safety training and advertisement.

## Goals

Improve the safety of Montana motorcyclists through reduction of deaths, injury and property damage on streets and highways by making high quality, certified safety training available across the state.

## Authorization

Federal/State Statute or Regulation	Title and Description
61-2-401	Motorcycle Safety Promotion. See Goals above.
61-2-402	Motorcycle Safety Advisory Committee. Establishes a committee to advise the Superintendent on motorcycle safety issues.
61-2-403	Standards for Motorcycle Safety Training. Establishes minimum standards for training based upon Motorcycle Safety Foundation standards.
61-2-404	Motorcycle Safety Training Course Fees. Authorizes charging of fees and contracting for motorcycle training throughout the state.
61-2-405	Motorcycle Registration Fee. Establishes a \$2.50 fee on each motorcycle registered for

licensing.

61-2-406

Motorcycle Safety Training Account. Establishes an account to receive revenue collected from motorcycle registrations.

P.L. 89-564

Highway Traffic Safety Grants and Local Assistance. Reduce highway traffic injuries and death.

## Base Program

The Motorcycle Safety Program is mandated to establish administrative procedures, contracts, fee schedules, fee reimbursement, course monitoring, evaluation, instructor selection procedures and criteria, planning, advertising, motorcycle awareness promotion, budget management, and program management necessary to provide motorcycle safety training in Montana. The program contracts with and provides technical assistance to local entities providing the training. P.L. 89-564 funds provide for one FTE to administer the program.

## Base Funding

The program described above is funded from the \$2.50 motorcycle registration fee. Motorcycle registrations have declined at an average of 9.4% each year since 1983. FY 90 revenue is estimated at \$50,715. If the decline continues at the same rate, revenue may be insufficient to support the program at necessary levels. Using 9.4% as a reduction factor, FY 92 revenue is estimated at \$41,629, FY 93 at \$37,716. P.L. 89-564 funds are not expected to change. Revenues are statutorily appropriated.

## Performance Indicators

Workload Measures	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
Number of novice riders trained	100	140*	140	140
Number of experienced riders trained	60	100	125*	125
Number of Instructors trained	22	10	10	10
Develop and contract with local program sponsor/trainers	6	12	14	16

OFFICE OF PUBLIC INSTRUCTION

58

EDUCATIONAL SERVICES PROGRAM

\* Note: Numbers of riders trained increases for novices in FY91 and experienced in FY92 because numbers of local sponsors in place, and numbers of instructors providing training, are anticipated to peak in those years.

## Increase or Decrease to Base

None.



# DISTRIBUTION TO PUBLIC SCHOOLS PROGRAM

35010900.000

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr	----- Recommended	----- Base	Fiscal 1993 Incr/Decr	----- Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00	.00	.00
Operating Expenses	16,908.58	22,016	0	0	0	0	0	0
Local Assistance	303,952,982.60	393,168,937	418,668,937	18,297,000	436,965,937	418,668,937	17,825,000	436,493,937
Grants	5,421,892.37	4,132,782	4,132,782	0	4,132,782	4,132,782	0	4,132,782
<b>Total Agency Costs</b>	<b>\$309,391,783.55</b>	<b>\$397,323,735</b>	<b>\$422,801,719</b>	<b>\$18,297,000</b>	<b>\$441,098,719</b>	<b>\$422,801,719</b>	<b>\$17,825,000</b>	<b>\$440,626,719</b>
General Fund	42,098,818.97	41,982,030	41,968,937	112,655,000	154,623,937	41,968,937	128,189,000	170,157,937
State Special Revenue Fund	263,170,666.01	351,200,000	376,700,000	-94,358,000	282,342,000	376,700,000	-110,364,000	266,336,000
Federal Special Revenue Fund	4,122,298.57	4,141,705	4,132,782	0	4,132,782	4,132,782	0	4,132,782
<b>Total Funding Costs</b>	<b>\$309,391,783.55</b>	<b>\$397,323,735</b>	<b>\$422,801,719</b>	<b>\$18,297,000</b>	<b>\$441,098,719</b>	<b>\$422,801,719</b>	<b>\$17,825,000</b>	<b>\$440,626,719</b>

## Overview

The Distributions to Public Schools Program includes all discretionary distributions of state and federal funds to public schools.

## STATE AND COUNTY EQUALIZATION

Full Time Equivalent Employees	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Local Assistance	259,195,971.00	350,000,000	375,500,000	18,297,000	393,797,000	375,500,000	17,825,000	393,325,000
<b>Total Agency Costs</b>	<b>\$259,195,971.00</b>	<b>\$350,000,000</b>	<b>\$375,500,000</b>	<b>\$18,297,000</b>	<b>\$393,797,000</b>	<b>\$375,500,000</b>	<b>\$17,825,000</b>	<b>\$393,325,000</b>
General Fund	0.00	0	0	112,655,000	112,655,000	0	128,189,000	128,189,000
State Special Revenue Fund	259,195,971.00	350,000,000	375,500,000	-94,358,000	281,142,000	375,500,000	-110,364,000	265,136,000
<b>Total Funding Costs</b>	<b>\$259,195,971.00</b>	<b>\$350,000,000</b>	<b>\$375,500,000</b>	<b>\$18,297,000</b>	<b>\$393,797,000</b>	<b>\$375,500,000</b>	<b>\$17,825,000</b>	<b>\$393,325,000</b>

## Overview

The public school foundation program is designed to meet the constitutional mandate contained in Article X, Section 1 of the Montana Constitution. In February 1989 the Montana Supreme Court ruled that the existing system of public school funding denied the right of equal educational opportunity for Montana students as guaranteed by Article X. In response, the Legislature restructured the school funding system for fiscal year 1991 and beyond by increasing the foundation program schedules, adding a guaranteed tax base component, and increasing state taxes to fund the state share of equalization aid.

This budget includes only flow-through funding and no administrative costs. It also includes the budget to record the county basic 55 mill levy in the State's accounting records, even though those funds are not deposited in the State treasury.

## Goals

To distribute State funds to Montana Schools in accordance with the provisions of the Constitution, State statutes and Administrative Rule.

## Authorization

Federal/State  
Statute or Regulation

Title and Description

20-9-346 M.C.A.

Article X, Section 1 - Responsibility to administer distribution of state equalization

OFFICE OF PUBLIC INSTRUCTION



aid, ( 6 responsibilities).

Responsibility to administer distribution of guaranteed tax base aid.

Responsibility to administer retirement equalization aid.

20-9-369 M.C.A.

20-9-532 M.C.A.

### Base Program

Under base funding, the objective is to fully fund the foundation schedules, guaranteed tax base aid, and protested property taxes from the county 55 mill levy and bonus payments.

### Base Funding

The foundation program, bonus, guaranteed tax base and protested property tax payments are funded from the State Equalization Account in the Special Revenue Fund. The cost of the public school foundation program is determined by enrollment changes and the funding schedules adopted by the Legislature. Funding is distributed through the schedules on the basis of Average Number Belonging (ANB) in each school district.

Each permissive and retirement mill levied by a district is guaranteed to raise the same amount per ANB as one mill levied statewide raises per ANB. If a district's mill value is less than the statewide mill value then equalization aid is provided to make up the difference.

Net lottery revenues which had been used to offset county retirement levies are now allocated to the state equalization account.

### Performance Indicators

Workload Measure	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
# of School Districts	544	544	544	544
# Districts qualifying for GTB Aid	233	233	233	233

### Increase to Base

#### Foundation Program Schedule Inflation

In compliance with the Supreme Court decision, the 1989 Legislature accepted state responsibility to adequately

fund K-12 education.

To maintain the legislated level of equalization will require 4.66% annual inflationary increases in the foundation schedules. If inflationary factors are not considered, the level of current state equalization will be eroded.

### FUNDING REQUESTED:

State Special Revenue	FY92	FY93
	\$16,000,000	\$33,000,000

#### Guaranteed Tax Base Subsidy Inflation

The 1989 Legislature provided for guaranteed tax base (GTB) aid for the general fund and retirement fund to districts with below average taxable valuation per ANB. The amount of money provided was considered in calculating an acceptable level of equalization aide to districts. To maintain the legislated level of equalization aide will require 4.66% annual inflationary increases. Without an inflationary adjustment to this funding source, the level of equalization support will erode below levels approved by the 1989 Legislature. GTB aid for FY91 for both the general fund and retirement fund is \$44,500,000.

### FUNDING REQUESTED:

State Special Revenue	FY92	FY93
	\$2,073,700	\$4,244,034

#### Special Education Allowable Cost Inflation

State funding for special education allowable costs is a component of the state equalization of K-12 education costs. The 1989 Legislature increased the state's responsibility to adequately fund special education costs. To maintain the legislated level of equalization will require 4.66% annual inflationary increases. If inflationary factors are not considered, the level of

current state equalization will be eroded.

The 1989 legislative appropriation of \$33 million funded approximately 84% of 1990 special education approved allowable costs and 81.5% of FY91 costs. If allowable special education costs were fully funded by the state. The appropriation would increase by \$12 million in FY92 and \$14 million in FY93. This would have the effect of lowering property taxes statewide since districts would no longer have a levy locally for the unfunded costs.

#### FUNDING REQUESTED:

	FY92	FY93
State Special Revenue	\$1,500,000	\$3,100,000

#### Gifted and Talented Education

The current \$100,000 for gifted and talented start-up programs is the only state money available to districts for gifted and talented programs. This program would provide an additional \$749,000 for gifted education programs at an amount which is the average of the appropriations for gifted and talented education in the surrounding states.

This issue is the result of national and regional attention focused upon school excellence, at-risk students, and appropriate services to gifted and talented students in a continuous effort to provide services to Montana's gifted and talented students. In support of the Board of Public Education's focus on the need for gifted and talented programs, this office proposes to provide funds to each school district for those programs.

#### REGIONAL COMPARISON:

STATE	FY87 FUNDING	EXPENDITURES PER STUDENT (BASED UPON 3% OF ENROLLMENT)	
South Dakota	\$2,034,621		\$535
Idaho	2,000,000		\$314
Utah	875,000		\$ 69
Wyoming	405,279		\$137
North Dakota	168,423		\$ 47
Montana	100,000		\$ 22
Weighted Average			\$164

This budget request is based upon a weighted average of 3 percent of student enrollment for the six-state region.

OFFICE OF PUBLIC INSTRUCTION

With this funding, school districts can continue to develop their programs for gifted students (35% of districts based upon responses to a 1988 OPI survey), and the other 65% can begin to offer services.

#### FUNDING REQUESTED:

	FY92	FY93
FTE	1.00	1.00
General Fund	\$43,971	\$43,972
State Special Revenue	\$751,600	\$748,400

#### Other Issue

Due to a technical error in House Bill 28, the present allocations of individual income tax and corporate license tax to the public school equalization account expire on June 30, 1991. In fiscal 1991, these two revenue sources are projected to provide approximately \$143 million for schools. Because this revenue flow to the public school equalization account terminates in fiscal 1992, a general fund appropriation is necessary to replace the revenue. The executive budget proposes general fund appropriations of \$112.6 million for fiscal 1992 and \$128.2 million for fiscal 1993 to fund the foundation and guaranteed tax base aid programs with no increase in the foundation program schedules. The Office of Public Instruction intends to introduce legislation to restore the allocations of the individual income and corporate license taxes to the public school equalization account.



## STATE TRAFFIC EDUCATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00	.00	.00
Local Assistance	1,199,999.69	1,200,000	1,200,000	0	1,200,000	1,200,000	0	1,200,000
<b>Total Agency Costs</b>	<b>\$1,199,999.69</b>	<b>\$1,200,000</b>	<b>\$1,200,000</b>	<b>\$0</b>	<b>\$1,200,000</b>	<b>\$1,200,000</b>	<b>\$0</b>	<b>\$1,200,000</b>
State Special Revenue Fund	1,199,999.69	1,200,000	1,200,000	0	1,200,000	1,200,000	0	1,200,000
<b>Total Funding Costs</b>	<b>\$1,199,999.69</b>	<b>\$1,200,000</b>	<b>\$1,200,000</b>	<b>\$0</b>	<b>\$1,200,000</b>	<b>\$1,200,000</b>	<b>\$0</b>	<b>\$1,200,000</b>

## Overview

State Traffic Education annually allocates and distributes state traffic education account proceeds to local school districts conducting approved traffic education courses after first deducting funding necessary to provide for the state administration of the Traffic Education Program.

## Goals

Annually distribute all moneys in the state traffic education account as per appropriate state law and OPI policy.

## Authorization

Federal/State  
Statute or Regulation

Title and Description

20-7-506, M.C.A. Annual allocation and distribution of Traffic Education Account proceeds-allocation for state administration.

## Base Program

Annually order the distribution of all moneys available in the state traffic account after first deducting funding needed to provide for the state administration of the program. This requires the processing of all traffic education program reimbursement requests as per OPI policy.

## Base Funding

We anticipate no significant changes in FY92 and FY93 from current level revenue amounts. Amounts deducted for administration purposes are spent in Program 06 - Other

Educational Services. Expenditures from this budget are appropriated as a language appropriation.

## Performance Indicators

Workload Measure	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
------------------	----------------	-----------------	--------------	--------------

Number of pupils processed for reimbursement

9,909	9,950	10,000	10,100
-------	-------	--------	--------

Increase or Decrease to Base None.

## DISTRIBUTIONS TO PUBLIC SCHOOLS

Full Time Equivalent Employees	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
	.00	.00	.00	.00	.00	.00	.00	.00
Operating Expenses	16,908.58	22,016						
Local Assistance	43,351,422.35	41,968,937	41,968,937	0	41,968,937	41,968,937	0	41,968,937
Grants	5,421,892.37	4,132,782	4,132,782	0	4,132,782	4,132,782	0	4,132,782
<b>Total Agency Costs</b>	<b>\$48,790,223.30</b>	<b>\$46,123,735</b>	<b>\$46,101,719</b>	<b>\$0</b>	<b>\$46,101,719</b>	<b>\$46,101,719</b>	<b>\$0</b>	<b>\$46,101,719</b>
General Fund	41,893,229.41	41,982,030	41,968,937	0	41,968,937	41,968,937	0	41,968,937
State Special Revenue Fund	2,774,695.32	0	0	0	0	0	0	0
Federal Special Revenue Fund	4,122,298.57	4,141,705	4,132,782	0	4,132,782	4,132,782	0	4,132,782
<b>Total Funding Costs</b>	<b>\$48,790,223.30</b>	<b>\$46,123,735</b>	<b>\$46,101,719</b>	<b>\$0</b>	<b>\$46,101,719</b>	<b>\$46,101,719</b>	<b>\$0</b>	<b>\$46,101,719</b>

## Overview

The Distribution to Schools program consists of state and federal special education, school foods, state and federal secondary vocational education, Job Training Partnership Act funds, gifted and talented, state and federal adult basic education, sex desegregation, and transportation.

State special education funds the majority of the costs associated with serving handicapped children. The distribution of the state general fund appropriation is based on approved services for each school district.

The school foods program disburses federal funds and USDA donated foods for school food services.

Vocational education grants are allocated to local agencies for vocational and community education programs.

Job Training Partnership Act funds are passed through OPI to local education agencies, community-based organizations, and social service agencies that provide educational and job training services to eligible youth and adults.

Gifted and Talented grants are provided to districts for the development and improvement of programs for gifted and talented learners. Funds are disbursed in the form of competitive grants that require local matching funds.

Adult Basic Education funds are used to operate adult basic education centers and related programs. Federal funds for

adult basic education require a 25 percent non-federal match.

Federal Desegregation Technical Assistance grants provide funds to reimburse districts for expenses incurred in training educators to comply with federal, state, court-ordered, and Board of Education requirements mandating equity in educational programs and activities. Funds are awarded to school districts through a competitive grant process which establishes several new training sites each year.

State transportation funds reimburse school districts for providing transportation to students living more than 3 miles from school. The state's share of the reimbursement is one-third of the statutory schedule, which is based upon rate per mile, bus size, and occupancy. The state reimbursement for transportation of special education students equals two-thirds of the statutory rate.

## Goals

- To disburse federal and state funds to local education agencies, community-based organizations, and other eligible recipients for direct services provided by these programs.
- To provide policy direction and administrative guidance, and ensure that these pass-through funds and grants are spent in compliance with the authorizing federal and state legislation.



## Authorization

<u>Federal/State Statute or Regulation</u>	<u>Title and Description</u>
EHA 20 USC Sec. 1400-1485	The Education for All Handicapped Children Act of 1974 As Amended, (P.L. 94-142).
34 CFR Part 76 and Part 77	Education Department General Administrative Regulations (EDGAR).
34 CFR Part 300	Assistance to States for Education of Children.
34 CFR Part 104	Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.
20-9-321, M.C.A.	Maximum General Fund Budget and Contingency Funds for Special Education (Temporary).
20-7-431, M.C.A.	Allowable Cost Schedule for Special Programs - Superintendent to Make Rules-Annual Accounting.
20-7-443, M.C.A.	Financial Assistance for Under Six-Year-Old Special Education.
20-7-422, M.C.A.	Out-of-State Tuition for Special Education Children (Temporary).
20-9-603, M.C.A.	Requirement for the Superintendent to apply for and accept federal funds.
20-7-457, M.C.A.	Funding Provisions for Special Education Cooperatives as Joint Boards.
Sec. 2-12, 60 Stat. 230, as amended; sec. 10, 80 Stat. 270; 42 U.S.C. 1751-2760, 1779.	National School Lunch Act.
Subchapter A--Child Nutrition Programs, Part 210.17	
20-7-903 and 904, M.C.A.	Gifted and Talented Children.
P.L. 100-297 Elementary Title	Augustus F. Hawkins - Robert R. Stafford and Secondary School Improvements of 1988-III Adult Education Programs.
Federal Register and August 18, 1989	State-Administered Adult Education Programs Secretary's Discretionary Programs for Adult Education; Final Regulations.
Part VIII 34 CFR	Part 425, et al.
20-7-712, M.C.A.	Adult Basic Education Fund and its Distribution.
OFFICE OF PUBLIC INSTRUCTION	

Title IX

P.L. 92-318

Montana Constitution  
Article X; 49-2-307,  
M.C.A.

Accreditation Standard  
10.55.109

20-10-145, M.C.A.

20-10-141 and 142,  
M.C.A.

P.L. 97-300 (as amended)

20 CFR 626

20 CFR 627

20 CFR 629

20 CFR 630

53-2-1110, M.C.A.

29 CFR 31

20 CFR 32

P.L. 98-524 (as amended)

34 CFR 401.19

P.L. 98-524

34 CFR Parts 401,407  
through 412, and 414  
through 417

34 CFR Parts 74 through  
79

P.L. 97-300

Educational Amendments to the Civil Rights Act prohibiting discrimination in educational programs and activities receiving federal funds.

Technical assistance for desegregation of public schools.

Guarantee of equal education opportunity and freedom from discrimination in education.

Board of Public Education standard prohibiting discrimination by any district.

State Transportation Reimbursement.

Reimbursement by Mileage Rates.

Job Training Partnership Act (Section 123 - State Education Coordination Grants).

Introduction to Regulations Under the Job Training Partnership Act.

State Responsibilities Under the Job Training Partnership Act.

General Provisions Governing Programs Under Titles I, II, and III of the Job Training Partnership Act.

Programs Under Title II of the Job Training Partnership Act.

Coordination of Job Training and Employment Programs - Review of Job Training Plans.

Equal Opportunity in Employment in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.

Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or from Federal Financial Assistance.

Carl D. Perkins Vocational Education Act Coordination with programs under JTPA.

Assurances of coordination with programs under the Job Training Partnership Act.

Carl D. Perkins Vo-Ed Act.

Federal Vo-Ed Regulations.

Education Department General Administrative Regulations.

Job Training Partnership Act.



20 CFR

Implementing Regulations for Programs Pts 634-684 under JTPA

26 CFR

Implementing Regulations for the Targeted Jobs Tax Credit of the Internal Revenue Code.

P.L. 99-519

Asbestos School Hazard Abatement Act of 1984.

40 CFR Parts 702 to 799

Federal Asbestos Regulations for Schools and Toxic Substances.

29 CFR Parts 31 and 32

Equal Opportunity and Nondiscrimination.

P.L. 94-467, 97-129,

98-80, 98-620, 99-419,  
100-418, 100-551

Toxic Substance Control Act.

20-7, Part 3, M.C.A.

Vocational and Technical Education  
State Administrative Requirements Vo-Ed  
Requirements for Vo-Ed Programs.

Arm 10.44.101 through

107

Arm 10.44.201 through

210

75-2-502 and 503, M.C.A.

Asbestos Control.

## Base Budget

The level of grants and pass through monies available under these programs is dependent on federal and state appropriations. Program funding within the Office of Public Instruction is used to provide administrative, policy, and fiscal guidance to educational service providers.

## Base Funding

State special education, transportation, and gifted and talented funding is provided through a general fund appropriation. School foods is funded under the National School Lunch Act and requires a state general fund match. The matching requirement is computed by comparing the per capita income of the state to that of the nation. The state appropriation may not be less than 30 percent of the federal school lunch funds received in fiscal 1981. Neither state revenues derived from the operation of the program nor administrative expenses may be counted as part of the match.

Federal funding for Adult Basic Education, provided under P.L. 100-297, Title III, requires a 25 percent non-federal match. State adult basic education funds must also be matched with local funding.

The gender equity program is federally funded through a Title IV Desegregation Grant (P.L. 88-352, CFD 840.004C).

State education coordination grants under the Job Training Partnership Act are funded by a subgrant with the Montana Department of Labor and Industry. Funding is a direct function of federal appropriation by Congress and formula allocation to the state.

Vocational education is federally funded under P.L. 98-524 and P.L. 97-300; both federal acts require state matching funds. The required match for administration is 50 percent.

# Performance Indicators

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
<b>Special Education</b>				
Requests for Contingency Funds	110	112	114	114
Contingency Applications Approved	60	60	61	61
Contingency Projects Monitored	60	60	60	60
Allowable Costs Applications Approved	360	360	400	400
EHA Applications (amendments,transfers evaluations)	120	120	120	120
School Foods				
Number of Lunch Agreements	286	288	289	290
Number of Section 4 Meals Served	13,975,000	14,185,413	14,469,121	4,758,504
Gifted and Talented Current Grants	27	30	30	30
Summer Grants (projected)	4	5	5	5
Number of applications	50	75	90	90
Amendments processed	10	15	20	20
<b>Adult Basic Education</b>				
Number of Adult Basic Education Centers - Federal Funds	19	21	22	23
<b>Workload Measures</b>				
Number of Adult Basic Education Centers -State Funds	11	11	11	11
Number of Special Demonstration Projects -Federal Funds	8	8	8	8
Number of Homeless Adult Education Project Federal Funds	4	0	0	0
<b>Sex Desegregation</b>				
Number of Districts with initial training with continuing training	3	2-3	4	4
	6	8	8	8
Number of Hours Reviewing Applications Administration Training for 50 Facilitators	100 2400 50	150 2400 50	150 2400 50	150 2400 50
<b>Transportation</b>				
Bus Mileage Reimbursed	16,925,760	16,925,760	16,925,760	16,925,760
Individual contracts	3,000	3,000	3,000	3,000
# of students qualifying for Room and Board	456	456	456	456
Correspondence Course Students	6	6	6	6
<b>JTPA Ed. Coordination</b>				
Grants Negotiated	1	1	1	1
Grant Revision	2	2	2	2
Applications Processed	24	15	15	15
Contracts Negotiated	15	15	15	15
Contracts Revised	4	3	4	2



<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>	<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Technical Assistance Visits	9	9	15	9	Single Parent Projects	3	5	6	6
Projects Evaluated	15	15	15	15	Single Parents Served	80	90	100	100
Corrective Action Plans	5	4	4	4	Sex Equity Projects	4	8	10	12
Participants Served	662	600	600	600	Students Served in Sex Equity	120	250	300	350
<b>Vocational Education</b>					Criminal Offender Programs	2	2	2	2
Workshops Offered	20	30	30	20	Offenders Served	60	60	60	60
State Conferences Held	10	10	10	10	CDP Title II Students Served	13645	14000	14500	15000
Student Offices Trained	42	42	42	42	Consumer Home-Ec Students Served	2444	2500	2600	2600
Curriculum Guides	5	5	5	5	CDP Title I Students Served	3110	3200	3300	3300
Technical Assistance Calls	25918	26000	26000	26000	Agriculture Ed Programs	69	70	75	75
Career Success Magazine	28000	28000	28000	28000	Agriculture Ed Students Served	3164	3200	3300	3300
Teacher Organizations Served	6	6	6	6	Business Ed Programs	126	130	135	135
Handicapped Projects	36	40	40	40	Business Ed Students Served	6052	6300	6500	6500
Handicapped Served	715	750	800	850	Marketing Programs	17	20	20	20
Disadvantaged Projects	55	60	65	70	Marketing Students Served	1821	2000	2000	2000
Disadvantaged Served	2192	2250	2350	2500	Home Economics Programs	121	130	140	150
Adult Programs	31	35	35	35	Home Economics Students Served	7594	8000	8400	8800
Adults Served	2800	3200	3200	3200	Technology Education	91	100	120	140
Apprenticeship Programs	15	15	15	15	Technology Ed Students Served	6278	7000	7800	8600
Apprentices Served	250	250	250	250					

<u>Workload Measures</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Trade and Industrial Programs	43	50	50	50
Trade Students Served	3890	4200	4200	4200
Co-op Education Programs	23	25	25	25
Co-op Students Served	250	300	300	300

### **Increase to Base**

#### Chapter 1

Public Law 100-297 provides new funding to local school districts to participate in the required program improvement program established by the statute. These funds are flow-through funds to local school districts. The funds will be used by local school districts to improve Chapter I services for educationally disadvantaged children.

#### **FUNDING REQUESTED:**

	<u>FY92</u>	<u>FY93</u>
Federal Funds	\$ 90,000	\$90,000









# **BILLINGS VOCATIONAL TECHNICAL CENTER**





## BILLINGS VO TECH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	46.87	46.87	45.35	-2.65	42.70	-2.65	42.70
Personal Services	1,471,573.68	1,422,977	1,423,216	21,016	1,444,232	20,928	1,444,310
Operating Expenses	272,774.49	392,359	426,131	-88,355	337,776	-91,294	336,891
Equipment	51,998.88	92,287	92,287	-55,200	37,087	-54,506	37,781
<b>Total Agency Costs</b>	<b>\$1,796,347.05</b>	<b>\$1,907,623</b>	<b>\$1,941,634</b>	<b>\$-122,539</b>	<b>\$1,819,095</b>	<b>\$-124,872</b>	<b>\$1,818,982</b>
Current Unrestricted Fund	1,796,347.05	1,907,623	1,941,634	-122,539	1,819,095	-124,872	1,818,982
<b>Total Funding Costs</b>	<b>\$1,796,347.05</b>	<b>\$1,907,623</b>	<b>\$1,941,634</b>	<b>\$-122,539</b>	<b>\$1,819,095</b>	<b>\$-124,872</b>	<b>\$1,818,982</b>
Instruction	987,455.94	1,076,022	1,076,511	-153,993	922,518	-154,364	922,592
Academic Support	52,630.17	30,756	40,885	13,320	54,205	13,346	54,205
Student Services	244,779.41	267,315	244,000	8,105	252,105	7,814	252,105
Institutional Support	298,452.45	256,131	292,132	15,253	307,385	14,768	307,385
Plant Operation & Maintenance	213,029.08	277,399	288,106	-5,224	282,882	-6,436	282,695
<b>Total Program Costs</b>	<b>\$1,796,347.05</b>	<b>\$1,907,623</b>	<b>\$1,941,634</b>	<b>\$-122,539</b>	<b>\$1,819,095</b>	<b>\$-124,872</b>	<b>\$1,818,982</b>

## AGENCY SUMMARY MISSION AND GENERAL DESCRIPTION

In 1969 the 41st Legislative Assembly of Montana created five postsecondary vocational technical centers located in Billings, Butte, Great Falls, Helena, and Missoula. In September of that year, the Billings Center opened with an enrollment of 87 students. In 1969 the Center offered twelve programs in nine rented facilities throughout the city of Billings.

A building program was instituted in 1977 and was completed in 1980 and all programs were consolidated in a single campus situated on the west side of Billings.

The Superintendent of Public Instruction and local school districts governed the postsecondary vocational technical centers until Chapter 658, Laws of 1987, transferred governance to the Board of Regents of Higher Education effective July 1, 1987. This law provided for a two-year transition period from July 1, 1987 to June 30, 1989. All vocational technical center directors became state employees on July 1, 1987. All other center employees continued to be local

school district employees through June 30, 1989, and became state employees on July 1, 1989.

The Center is accredited by the Commission on Colleges of the Northwest Association of Schools and Colleges.

The primary role of the Center is to provide individuals preparing to enter, advance, or change careers, with vocational and technical competencies and life skills. Students acquire technological competencies or upgrade competencies through curriculum validated by business and industry on a regular basis. Instructional and community service activities are designed to meet the present and emerging occupational needs of the students and the business community.

The Billings Vocational Technical Center's curriculum provides graduates with technological competencies as well as related, academic competencies in the area of communications, computation, and human relations. When appropriate, safety and industrial environmental awareness courses are provided. Graduates become employees with added value to their employers by the acquisition of occupational competencies, study skills and habits, clear communication abilities, the ability to work independently or as part of a team, and to accept change

within the workplace. Twenty certificates are awarded through the Center's nine instructional programs. Programs unique to the Center are:

CAD [Computer Assisted Drafting]  
HVAC [Heating/Ventilating/Air Conditioning]  
Major Appliance Repair

The Billings Vocational Technical Center is also a nationally recognized AUTOCAD training center.

The Center participates in developing collaborative relationships with other postsecondary institutions to provide beneficial and accessible educational opportunities and to ensure the most effective and responsible use of resources.

#### **AGENCY ORGANIZATION**

The programs and functions of the Center are carried out through the following major organizational components:

The administrative team consists of the Director, Supervisor of Academic Affairs, Supervisor of Administrative Affairs, and the Supervisor of Student and Public Affairs. The faculty and support staff report to the appropriate supervisor.

All academic related activities flow through the portion of the chart headed with the title Supervisor of Academic Affairs.

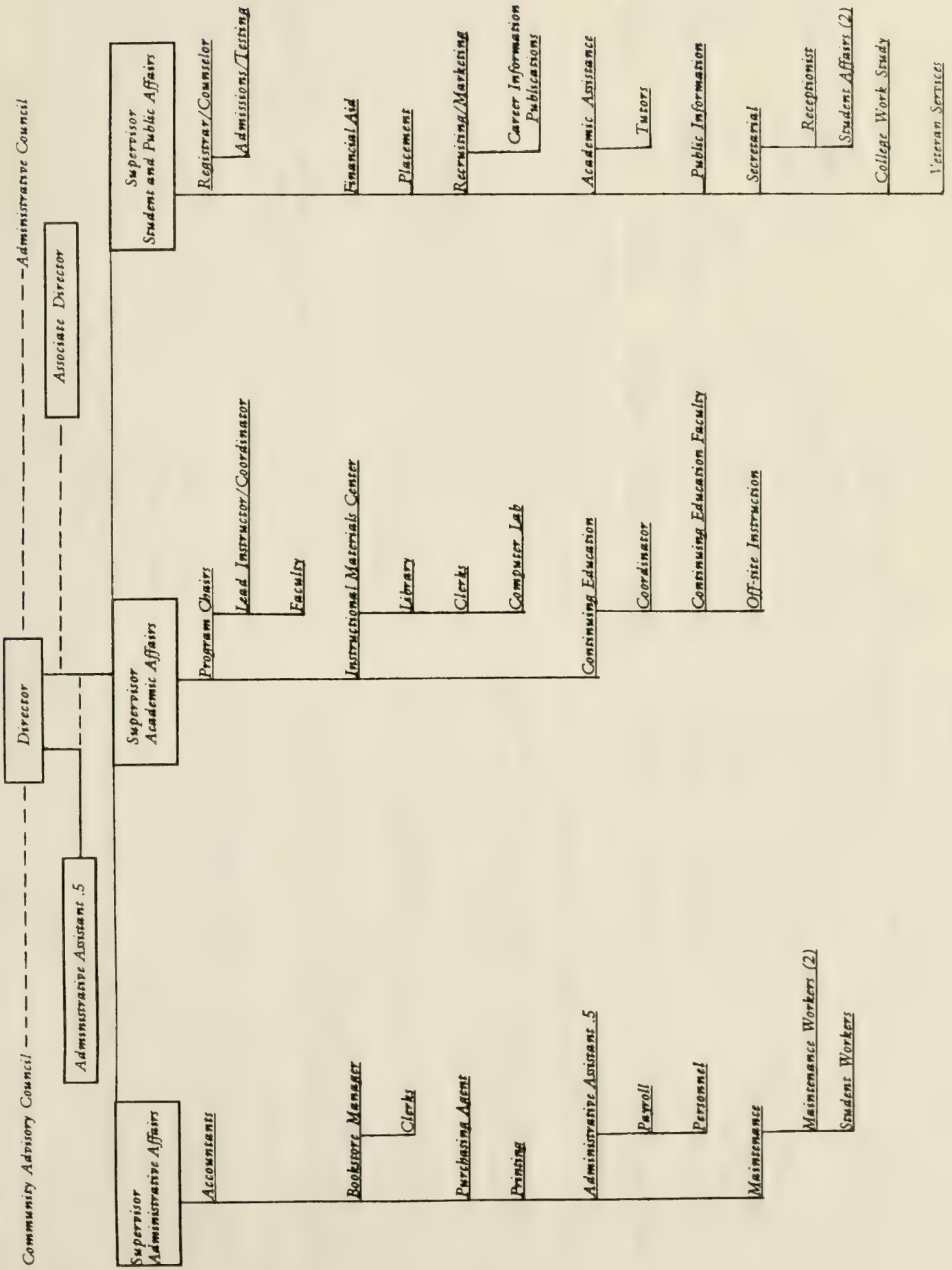
Financial matters are administered through the portion of the chart headed Supervisor of Administrative Affairs.

Student related matters are under the portion of the chart headed Supervisor of Student and Public Affairs.

Of course there are activities where all three supervisors are involved and share responsibilities.

Some positions indicated on the chart are not operational at this time, due to funding. It is appropriate to show them on the chart to indicate planning for growth and expansion when funds are available.

Community Advisory Council - - - - - Administrative Council





# INSTRUCTION PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	27.87	27.87	26.87	-3.00	23.87	-3.00
Personal Services	912,360.49	891,558	891,581	-44,159	847,422	-44,143
Operating Expenses	26,756.96	133,224	133,690	-82,255	51,435	-83,343
Equipment	48,338.49	51,240	51,240	-27,579	23,661	-26,878
Total Agency Costs	\$987,455.94	\$1,076,022	\$1,076,511	\$-153,993	\$922,518	\$-154,364
Current Unrestricted Fund	987,455.94	1,076,022	1,076,511	-153,993	922,518	-154,364
Total Funding Costs	\$987,455.94	\$1,076,022	\$1,076,511	\$-153,993	\$922,518	\$-154,364

## INSTRUCTION PROGRAM OVERVIEW

The Instruction Program budget provides funding for courses offered at the center. These range from traditional vocational technical classes to related instruction classes, and remedial and tutorial classes.

### GOALS

-To provide our graduates with the technical skills and competencies necessary to become successful, contributing members of the community and the State of Montana.

-To work with the business community to continually validate the appropriateness of the course offerings within each instructional program; then, incorporate this validation into the day-to-day instructional delivery.

### BASE PROGRAM

The Instruction Program budget provides funds for the delivery of instruction to our students. This includes faculty salaries, supplies and equipment used in the instruction of students, expenses for conferences, workshops, inservice, and committee work related to instruction.

The Center houses ten vocational programs:

AUTOMOTIVE COLLISION REPAIR TECHNOLOGY  
AUTOMOTIVE TECHNOLOGY

BILLINGS VO TECH

BUSINESS AND OFFICE TECHNOLOGY  
CULINARY ARTS  
DIESEL TECHNOLOGY  
DRAFTING TECHNOLOGY  
HEALTH TECHNOLOGY  
HEATING, VENTILATING AND AIR  
CONDITIONING TECHNOLOGY  
MAJOR APPLIANCE REPAIR TECHNOLOGY  
METAL FABRICATION TECHNOLOGY

Twenty different certificates of completion are available within the above program areas.

### BASE FUNDING

The Instruction Program is funded by general fund, mandatory millage, student tuition/fee assessments and federal Carl Perkins funds (FY 90 and FY 91 only).

### PERFORMANCE INDICATORS

Workload Measure	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Instructional FTE	27.87	27.87	27.87	27.87

The following page is a chart showing performance as it relates to enrollment in specific instructional areas.

BILLINGS VOCATIONAL TECHNICAL CENTER  
FTE AND HEAD COUNT PROJECTION

<u>Program</u>	<u>89-90</u>			<u>90-91</u>			<u>91-92</u>			<u>92-93</u>		
	<u>Heads</u>	<u>FTE</u>	<u>Revenue</u>	<u>Heads</u>	<u>FTE</u>	<u>Revenue</u>	<u>Heads</u>	<u>FTE</u>	<u>Revenue</u>	<u>Heads</u>	<u>FTE</u>	<u>Revenue</u>
Unclassified	03	03.5	\$ 3,066	41	19.9	\$17,345	42	20.3	\$17,783	43	20.7	\$18,133
Accounting/ Bookkeeping	21	25.8	22,601	20	22.9	19,973	20	23.4	20,498	20	23.9	20,936
Legal Secretary	21	29.4	25,754	17	17.0	14,892	17	17.3	15,155	17	17.6	15,418
Medical Secretary	27	37.2	32,587	24	27.8	24,353	25	28.4	24,878	26	29.1	25,492
General Secretary	06	07.3	6,395	5	4.3	3,793	5	4.4	3,854	5	4.5	3,942
Small Business Operations	13	16.6	14,542	1	.2	175	1	.2	175	1	.2	175
Practical Nurse	63	81.8	71,657	78	92.3	80,881	80	94.1	82,432	82	96.0	84,096
Culinary Arts	13	14.5	12,702	21	33.9	29,670	21	34.6	30,310	21	35.3	30,923
Major Appliance Repair	20	25.1	21,988	11	11.7	10,275	11	12.1	10,600	11	12.3	10,775
Heating, Ventilating & Air Conditioning	16	17.4	15,242	15	19.7	17,283	15	20.1	17,608	15	20.5	17,958
Automotive Collision & Refinishing Technician	21	24.4	21,374	22	31.9	27,918	22	32.5	28,470	22	33.2	29,083
Automotive Technician	33	33.8	29,609	17	19.2	16,819	17	19.6	17,170	17	30.1	17,608
Diesel Technician	37	40.8	35,741	21	24.7	21,663	21	25.2	22,075	21	26.0	22,776
Drafting	35	41.4	36,266	44	59.7	52,271	45	46.0	40,296	46	47.0	41,172
Metal Fabrication Technology				5	5.9	5,142	5	6.0	5,256	5	6.0	5,256
TOTAL	329	399.0	349,524	342	391.1	342,453	347	384.2	336,560	352	392.4	343,743

# ACADEMIC SUPPORT PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	3.75	1.25	1.46	-.03	1.43	-.03
Personal Services	44,899.02	24,351	27,546	18,697	27,513	18,730
Operating Expenses	5,159.30	6,405	3,339	1,982	3,346	1,982
Equipment	2,571.85	0	10,000	-7,359	10,000	-7,366
Total Agency Costs	\$52,630.17	\$30,756	\$40,885	\$13,320	\$40,859	\$13,346
				\$54,205		\$54,205
Current Unrestricted Fund	52,630.17	30,756	40,885	13,320	40,859	13,346
Total Funding Costs	\$52,630.17	\$30,756	\$40,885	\$13,320	\$40,859	\$13,346
				\$54,205		\$54,205

## ACADEMIC SUPPORT OVERVIEW

The Academic Support Program budget funds are expended primarily to provide support of the Center's mission; instruction and public service.

It includes the retention, preservation, and display of educational materials; the library, the provision of services that directly assist the academic functions of the Center, media such as audiovisual services and technology such as computing support, academic administration and personnel development providing administration support and management direction to the primary mission of the Center, budgeted support for course and curriculum development.

## GOALS

-To provide overall academic policy direction and academic leadership for the Center in a manner consistent with the goals and objectives of vocational technical education in the State of Montana.

-To provide the support services necessary to enable the academic programs to effectively and efficiently deliver services to students.

## BASE PROGRAM

The Academic Support Program budget provides funds to support the academic program delivered to our students. This includes salaries, supplies and equipment.

BILLINGS VO TECH

## BASE FUNDING

The Academic Support Program is funded by general fund, mandatory millage and student tuition/fee assessments.

## PERFORMANCE INDICATORS

Workload Measure	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
Number of pages printed:	469,426	480,000	490,000	500,000
Library:				
Volume	2,715	2,851	2,995	3,143
Acquisitions	210	231	254	279
Periodicals	760	760	760	760
Subscriptions	92	97	101	107
Attend. (Weekly)	90	100	100	110
Community Use (Annual)	90	90	90	90
Curriculum:				
Pgm. Revisions	2	4	4	4
New Programs	0	0	1	1
Associate Degree Submissions		0	0	33

ACADEMIC SUPPORT PROGRAM



# STUDENT/PUBLIC AFFAIRS PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	6.00	7.00	7.00	.35	7.00	.35
Personal Services	191,028.31	234,606	195,626	1,119	196,745	1,108
Operating Expenses	53,064.00	32,709	48,374	6,278	54,652	5,998
Equipment	687.10	0	0	708	0	708
Total Agency Costs	\$244,779.41	\$267,315	\$244,000	\$8,105	\$252,105	\$7,814
Current Unrestricted Fund	244,779.41	267,315	244,000	8,105	252,105	7,814
Total Funding Costs	\$244,779.41	\$267,315	\$244,000	\$8,105	\$252,105	\$7,814
						\$252,105

## STUDENT/PUBLIC AFFAIRS OVERVIEW

The Student/Public Affairs office is responsible for activities in the following areas:

### ADMISSIONS

Recruitment  
Applications  
Catalogues  
Fee Schedules  
Enrollment  
Add/Drop Classes

### FINANCIAL AID

Financial Aid Application  
Financial Assistance Programs  
Grants/Loans  
Work Study  
Agency Assistance  
Veterans' Educational Benefits

### PLACEMENT

Career Information  
Placement Information  
Job Seeking Assistance  
Statistics

### REGISTRAR

Student Records  
Transcript Requests  
Credit Transfer

### COUNSELING

Career Advisement  
Personal Counseling  
Academic Advisement  
Testing

### PUBLIC INFORMATION

Community Activities  
Marketing  
Promotions

## GOALS

Our purpose is to serve students and create public awareness for the Center through advertising, service club presentations, recruiting, and participation in high school Career Day activities and our Adopt-a-Student program.

Once a student indicates an interest in enrolling in the Center, we provide the necessary services for them to have a positive educational experience for all activities outside of instruction.

## BASE PROGRAM

The budget supports these activities and an FTE of 7.0 provides the necessary personal services in the positions indicated on the Center's organizational chart.

## BASE FUNDING

The Student/Public Affairs Program is funded by general fund, mandatory millage, student tuition/fee assessments and federal Carl Perkins funds (FY 90 and FY 91).

# PERFORMANCE INDICATORS

Workload Measure	FY90 Actual	FY91 Enacted	FY92 Base	FY93 Base
------------------	----------------	-----------------	--------------	--------------

## STUDENT AFFAIRS

### Financial Aid:

- Applications Processed
- Students Receiving Aid
- Pell Recipients
- SEOG Recipients
- SSIG Recipients
- CWS Recipients
- MGSL/SLS Recipients

### Counseling:

- Career Advisement
- Personal Counseling
- Academic Advisement
- Testing

### Registrar:

- Transcripts Processed
- Applications Processed
- Credits Transferred
- Student Records

## PUBLIC AFFAIRS

### Promotions:

- Presentations  
(TV talk show, human resources/civic org.)
- Trade Shows/Open House
- Public Tours

### Recruiting:

- Direct Mails (Mass Mailing)
- Mail Information
- Career Fairs
- High School Visits
- AAS

### Placement:

- Students Contacts
- Employer Contacts

# INSTITUTIONAL SUPPORT PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Dect Recommended	----- Base	Fiscal 1993 Incr/Dect Recommended
Full Time Equivalent Employees	5.25	6.75	5.75	.00	5.75	.00
Personal Services	238,189.61	181,766	211,190	34,129	211,247	34,072
Operating Expenses	60,187.84	47,187	63,764	-1,775	64,192	-2,203
Equipment	75.00	27,178	17,178	-17,101	17,178	-17,101
Total Agency Costs	\$298,452.45	\$256,131	\$292,132	\$15,253	\$292,617	\$14,768
Current Unrestricted Fund	298,452.45	256,131	292,132	15,253	292,617	14,768
Total Funding Costs	\$298,452.45	\$256,131	\$292,132	\$15,253	\$292,617	\$14,768

## INSTITUTIONAL SUPPORT OVERVIEW

This program includes expenditures for: (1) central executive-level activities concerned with management and long-range planning of the entire institution; (2) fiscal operations; (3) employee personnel and records; and (4) logistical activities that provide purchasing and maintenance of supplies and materials, printing, etc. services to the institution.

## GOALS

-To provide management/fiscal services necessary to effectively and efficiently support the Center's educational mission.

- To implement long-range planning activities to identify and mitigate major issues facing the institution.

Issues facing the Institution:  
Insert FTE and Head Count Projection Table Here

## BASE PROGRAM

The Institutional Support program provides the policy making, administrative, clerical, and personnel support for the Center. The purpose of the Institutional Support Program is to provide support services to enable the Center to most effectively and efficiently provide services to the Center's students, faculty and staff. The objectives for each subactivity are as follows:

The Director's Office performs policy-making and administrative functions for the Center.

## BILLINGS VO TECH

## INSTITUTIONAL SUPPORT PROGRAM

The Fiscal Office performs all administrative services for the Center including accounting, budgeting, purchasing, financial aid disbursement, cashiering, disbursing mail, payroll, personnel and central supplies.

The Chief Academic Officer performs policy-making and administrative functions for the Center as well as maintains the integrity of all instructional programs.

## BASE FUNDING

The Institutional Support Program is funded by general funds, mandatory millage and student tuition/fee assessments.

## PERFORMANCE INDICATORS

<u>Workload Measure</u>	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Transaction Lines Processed	1,651	12,700	12,900	12,900
Payroll/Personnel	1,965	2,004	2,004	2,085



# PLANT OPERATION & MAINTENANCE PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	4.00	4.00	4.27	.03	4.30	.03	4.30
Personal Services	85,096.25	90,696	97,273	11,230	108,503	11,161	108,507
Operating Expenses	127,606.39	172,834	176,964	-12,585	164,379	-13,728	164,188
Equipment	326.44	13,869	13,869	-3,869	10,000	-3,869	10,000
Total Agency Costs	\$213,029.08	\$277,399	\$288,106	\$-5,224	\$282,882	\$-6,436	\$282,695
Current Unrestricted Fund	213,029.08	277,399	288,106	-5,224	282,882	-6,436	282,695
Total Funding Costs	\$213,029.08	\$277,399	\$288,106	\$-5,224	\$282,882	\$-6,436	\$282,695

## PLANT OPERATION & MAINTENANCE OVERVIEW

This program includes all expenditures of current funds for the operation and maintenance of the physical plant. It includes all expenditures for operations established to provide services and maintenance related to campus grounds and facilities, utilities, fire protection, property insurance and similar items.

### GOALS

- To provide the support services necessary to efficiently operate and maintain the Center's physical plant.
- To identify and mitigate major maintenance/repair projects.

### BASE PROGRAM

The staff in this program provide custodial services and repair and maintain the contents of the 115,000 square foot building occupied by the Center. In addition, 20 plus acres of grounds require irrigation, landscaping, mowing, snow removal and parking lot and road maintenance. Since the Center was built in 1977, major faculty repair and renovation projects are now a major concern.

### BASE FUNDING

The Plant Program is funded by general fund, mandatory millage and student tuition/fee assessments.







---

**BUTTE VOCATIONAL TECHNICAL CENTER**

---



# BUTTE VO TECH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	38.40	38.40	38.52	.25	38.77	.25	38.77
Personal Services	1,292,092.59	1,331,564	1,329,170	29,779	1,358,949	1,329,485	1,359,330
Operating Expenses	276,814.68	324,332	337,780	-37,907	299,873	339,102	300,737
Equipment	51,156.80	84,113	73,988	-21,414	52,574	73,988	52,574
Debt Service	11,736.16	0	11,737	-1,612	10,125	11,737	10,125
Total Agency Costs	<u>\$1,631,800.23</u>	<u>\$1,740,009</u>	<u>\$1,752,675</u>	<u>\$-31,154</u>	<u>\$1,721,521</u>	<u>\$1,754,312</u>	<u>\$1,722,766</u>
Current Unrestricted Fund	1,631,800.23	1,740,009	1,752,675	-31,154	1,721,521	1,754,312	1,722,766
Total Funding Costs	<u>\$1,631,800.23</u>	<u>\$1,740,009</u>	<u>\$1,752,675</u>	<u>\$-31,154</u>	<u>\$1,721,521</u>	<u>\$1,754,312</u>	<u>\$1,722,766</u>
Instruction	939,804.77	959,333	959,512	-7,080	952,432	959,911	952,587
Academic Support	116,752.49	141,505	164,633	-32,015	132,618	165,481	132,618
Student Services	207,723.14	235,971	222,331	13,618	235,949	222,487	235,949
Institutional Support	155,197.15	168,424	172,792	1,662	174,454	172,838	174,454
Plant Operation & Maintenance	212,322.68	234,776	233,407	-7,339	226,068	233,595	227,158
Total Program Costs	<u>\$1,631,800.23</u>	<u>\$1,740,009</u>	<u>\$1,752,675</u>	<u>\$-31,154</u>	<u>\$1,721,521</u>	<u>\$1,754,312</u>	<u>\$1,722,766</u>

## BUTTE VOCATIONAL TECHNICAL CENTER ROLE AND SCOPE

### 1. Nature of the Institution:

The Butte Vocational Technical Center is a postsecondary non-residential educational institution providing occupational training that is responsive to the present and future needs of the residents of Silver Bow County, its contiguous area, and the State of Montana. The Center also offers adult and continuing education courses to provide additional service to the community.

### 2. Areas of Emphasis:

The Butte Vocational Technical Center provided both core related education and occupationally-specific instruction to meet a variety of employment needs within its service area. In addition to the core curriculum in applied mathematics, communications, human relations, cooperative work experience,

and microcomputer literacy, the Center offers eleven principal programs of study with eleven options within those programs. The principal programs of study are in the areas of business and office occupations, health occupations, technical occupations, and trades and industrial occupations. The Civil Engineering Technology program is unique to the Butte Center within the system of five centers in the state.

### 3. Areas of Continuing Development:

The Butte Vocation Technical Center will continue to offer occupationally-specific and related instruction to prepare students for technological employment. The Center will continue to meet immediate and short-term training needs of industry and business within its major service area as well as to offer courses of instruction that meet continuing and stable market demands for technologically skilled workers. The Center will continue to participate in the process of developing collaborative relationships with other Centers and postsecondary institutions to provide better educational opportunities for



Montana citizens and to ensure the most effective and responsible use of resources.

**4. Degree Levels:**

The Butte Vocational Technical Center offers certificates of completion and/or Associate of Applies Science Degrees, as appropriate, leading to employment in a business or job recognized by industry.

**5. Constituencies Served:**

The Butte Vocational Technical Center provides open admission for residents of Montana. Nonresidents of Montana may be admitted provided they do not displace Montana residents.

[illegible]

# INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	22.65	22.65	23.25	.00	23.25	.00	23.25
Personal Services	812,319.43	792,699	792,259	32,687	824,946	32,789	825,101
Operating Expenses	74,398.38	120,347	120,966	-39,767	81,199	-40,113	81,199
Equipment	42,962.80	46,287	36,162	0	36,162	0	36,162
Debt Service	10,124.16	0	10,125	0	10,125	0	10,125
<b>Total Agency Costs</b>	<b>\$939,804.77</b>	<b>\$959,333</b>	<b>\$959,512</b>	<b>\$-7,080</b>	<b>\$952,432</b>	<b>\$-7,324</b>	<b>\$952,587</b>
Current Unrestricted Fund	939,804.77	959,333	959,512	-7,080	952,432	-7,324	952,587
<b>Total Funding Costs</b>	<b>\$939,804.77</b>	<b>\$959,333</b>	<b>\$959,512</b>	<b>\$-7,080</b>	<b>\$952,432</b>	<b>\$-7,324</b>	<b>\$952,587</b>

## OVERVIEW

1. The Instructional Category consists of 22.85 FTE. The FTE represents 6.0 GTE in Trade/Industry, 5.0 FTE in Technical, 3.0 FTE in Health Occupations, 8.0 FTE in Business Technology, .65 FTE in Continuous Ed., .10 FTE in Instructional Substitutes and .10 FTE in Work Study.
2. The Center offers 11 principal programs with 13 options plus an additional 11 continuing ed courses. The 11 principal programs are: Office Bookkeeping Specialist, Office Secretarial Specialist, Information Processing Specialist, Practical Nursing, Civil Engineering, Drafting Technology, Electrical/Electronics, Machine Tool Operation, Welding Technology, Small Engines and Recreational Equipment, Automotive Mechanics Technology.
3. Based on credit FTE the student FTE is 377 which provides for a teacher-pupil ratio of 17:61.
4. The Board of Regents has approved the AAS Degree in Civil Engineering Technology and Civil Engineering Design and Drafting Technology effective January, 1990 for the Butte Vo Tech Center.
5. Currently the Center houses the Montana-Tech Welding Program.
6. Concern: In order to account accurately for this program's personal services expenditures it is necessary for us to be allowed to make appropriation authority transfers between programs.



## ACADEMIC SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	3.25	3.25	2.75	.00	2.75	.00	2.75
Personal Services	89,297.81	91,427	101,511	-79	101,432	-73	101,432
Operating Expenses	22,235.68	22,736	35,780	-10,522	25,258	-11,376	25,258
Equipment	5,219.00	27,342	27,342	-21,414	5,928	-21,414	5,928
<b>Total Agency Costs</b>	<b>\$116,752.49</b>	<b>\$141,505</b>	<b>\$164,633</b>	<b>\$-32,015</b>	<b>\$132,618</b>	<b>\$-32,863</b>	<b>\$132,618</b>
Current Unrestricted Fund	116,752.49	141,505	164,633	-32,015	132,618	-32,863	132,618
<b>Total Funding Costs</b>	<b>\$116,752.49</b>	<b>\$141,505</b>	<b>\$164,633</b>	<b>\$-32,015</b>	<b>\$132,618</b>	<b>\$-32,863</b>	<b>\$132,618</b>

## OVERVIEW

1. The Academic Support Category consists of 2.75 FTE. The 2.75 FTE represents 7.24% of the Center's personnel.
2. Program advisory committees consisting of center instructional personnel and representatives from the community in the occupational areas of business, labor, industry, health, etc. are active.
3. The library supports the instructional program effort. 6285 students utilized the library during biennium '91. Northwest Association of Schools and Colleges conducted an interim visit on October 24, 1990 primarily to evaluate the library. Improvements made by the center administration in the library rendered a very favorable report by Northwest.
4. The Academic Support Category is the management level of support to the category instruction.

## STUDENT SERVICES

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	5.00	5.00	5.10	5.35	5.10	5.35
Personal Services	165,536.20	181,783	182,992	188,029	183,052	188,029
Operating Expenses	42,186.94	54,188	39,339	47,920	39,435	47,920
Total Agency Costs	<u>\$207,723.14</u>	<u>\$235,971</u>	<u>\$222,331</u>	<u>\$235,949</u>	<u>\$222,487</u>	<u>\$235,949</u>
Current Unrestricted Fund	207,723.14	235,971	222,331	235,949	222,487	235,949
Total Funding Costs	<u>\$207,723.14</u>	<u>\$235,971</u>	<u>\$222,331</u>	<u>\$235,949</u>	<u>\$222,487</u>	<u>\$235,949</u>

## OVERVIEW

1. Student Services category consists of 4.95 FTE. The 4.95 FTE represents 13.04% of the center's personnel.
2. Student Services through admissions process on an average of 604 students per quarter with an annual graduation average of 140 per year. Student Services also processes approximately 1014 applications per year.
3. During the biennium '91, 21% or 53 students transferred to collegiate level institutions, 77% of 178 students were employed, 2% or 19 students departed the area. The average wage of students employed was \$13,578.
4. Financial Aid provides approximately 28% of the Center's Students with employment through the CWS program, 56% of the students participate in the GSL PLUS/SLS loans. Total Student financial aid for biennium '91: \$2,433,092.
5. The center store is self-supporting consisting of a total inventory of approximately \$32,132 with a net profit of \$6,677 per year.
6. The cafeteria provides services for approximately 320 students per day.
7. The Student Services Department is the "pulse" of the institution.

# INSTITUTIONAL SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Deer Recommended	Base	Incrr/Deer Recommended
Full Time Equivalent Employees	4.00	4.00	3.50	3.50	3.50	3.50
Personal Services	110,906.13	146,204	134,426	125,976	134,407	125,976
Operating Expenses	42,679.02	22,220	36,754	48,478	36,819	48,478
Debt Service	1,612.00	0	1,612	0	1,612	0
Total Agency Costs	\$155,197.15	\$168,424	\$172,792	\$174,454	\$172,838	\$174,454
Current Unrestricted Fund	155,197.15	168,424	172,792	174,454	172,838	174,454
Total Funding Costs	\$155,197.15	\$168,424	\$172,792	\$174,454	\$172,838	\$174,454

## OVERVIEW

1. The Institutional Support Category consists of 3.50 FTE. The 3.5 FTE represents 9.22% of the Center's personnel.
2. The Butte Vo Tech Center has been under the Governance of the Board of Regents since 1987.
3. The Butte Vo Tech Center is accredited by the Northwest Association/Schools and Colleges.
4. The Center will go on the semester system and credit hours FY 91.
5. A merger study is currently being conducted between Montana College of Mineral Science and Technology and The Butte Vo Tech Center.
6. Personnel FTE is 37.97.
7. A local advisory board consisting of 7 members is in place in accordance with H.B. - 39.



# PLANT MAINTENANCE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	3.50	3.50	3.92	.00	3.92	.00	3.92
Personal Services	114,033.02	119,451	117,982	584	118,566	583	118,792
Operating Expenses	95,314.66	104,841	104,941	-7,923	97,018	-7,020	97,882
Equipment	2,975.00	10,484	10,484	0	10,484	0	10,484
Total Agency Costs	\$212,322.68	\$234,776	\$233,407	\$-7,339	\$226,068	\$-6,437	\$227,158
Current Unrestricted Fund	212,322.68	234,776	233,407	-7,339	226,068	-6,437	227,158
Total Funding Costs	\$212,322.68	\$234,776	\$233,407	\$-7,339	\$226,068	\$-6,437	\$227,158

## PLANT & MAINTENANCE BUDGET TABLE

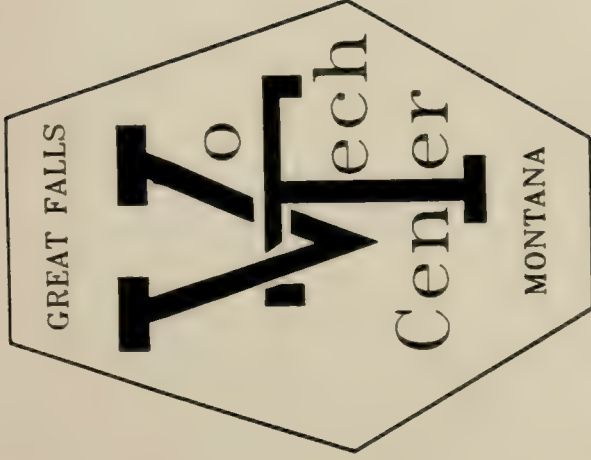
### OVERVIEW

1. The Plant Category consists of 3.92 FTE. The 3.92 FTE represents 10.32% of the Center's personnel.
2. The Butte Vo Tech Center was constructed on 15 of 40 acres in 1984. The facility contains approximately 100,000 square feet.
3. The facility is open from 7:00 a.m. to 10:00 p.m. daily, plus is utilized continuously by the community on weekends.
4. The maintenance supervisor works from 6:00 a.m. to 2:30 p.m. The maintenance engineer's hours are from 2:00 p.m. to 10:30 p.m. Three cleaners work 24 hours each per week and are responsible for 31,833 square feet. One cleaner maintains the commons 20 hours per week during lunch periods and is responsible for 4,500 square feet.
5. The maintenance department has received high commendations from Northwest Association of Schools and Colleges, OSHA, Workman's Compensation, etc. for the maintenance and cleanliness of the facility and grounds.









# **Great Falls Vocational-Technical Center**

## **Budget Narrative for the 1992-3 Biennium**



# GREAT FALLS VO TECH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	57.00	57.00	64.60	-3.60	61.00	-3.10	61.00
Personal Services	1,596,498.22	1,589,963	1,598,316	179,060	1,777,376	179,814	1,778,360
Operating Expenses	319,097.52	375,442	353,099	51,305	404,404	62,749	415,719
Equipment	108,458.15	99,864	79,379	-62,116	17,263	-75,688	3,691
Debt Service	15,264.00	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$2,039,317.89</b>	<b>\$2,065,269</b>	<b>\$2,030,794</b>	<b>\$168,249</b>	<b>\$2,199,043</b>	<b>\$166,875</b>	<b>\$2,197,770</b>
Current Unrestricted Fund	2,039,317.89	2,065,269	2,030,794	168,249	2,199,043	166,875	2,197,770
<b>Total Funding Costs</b>	<b>\$2,039,317.89</b>	<b>\$2,065,269</b>	<b>\$2,030,794</b>	<b>\$168,249</b>	<b>\$2,199,043</b>	<b>\$166,875</b>	<b>\$2,197,770</b>
Instruction	1,243,155.69	1,311,012	1,277,711	109,985	1,387,696	108,950	1,387,683
Academic Support	141,694.16	158,587	143,300	1,476	144,776	1,355	144,776
Student Services	168,220.28	136,822	145,488	26,389	171,877	26,356	171,877
Institutional Support	222,827.58	187,395	197,512	30,161	227,673	29,987	227,673
Plant Operation & Maintenance	263,420.18	271,453	266,783	238	267,021	227	265,761
<b>Total Program Costs</b>	<b>\$2,039,317.89</b>	<b>\$2,065,269</b>	<b>\$2,030,794</b>	<b>\$168,249</b>	<b>\$2,199,043</b>	<b>\$166,875</b>	<b>\$2,197,770</b>

## MISSION AND GENERAL DESCRIPTION

The Great Falls Vocational-Technical Center (GFVTC) is a public post-secondary education institution with a mission to provide employment training and upgrading in vocational and technical fields. To accomplish this mission, instructional programs and community service activities are designed to meet present and emerging local, state, regional, and national occupational needs. The Center emphasizes occupational training for individuals, business, labor, military, government, and human resource agencies.

The Center's programs provide occupationally specific and related instruction to meet a diversity of employment needs. The related education core curriculum includes courses in communication, computation, human relations, safety, and environmental awareness. Academic skill-building laboratories to support vocational training programs offer individualized learning opportunities in reading, language, mathematics, and study skills. A variety of programs are offered in three occupational specialty areas of health, business, and trades and technology. The Great Falls Vocational-Technical Center is authorized by the

Montana Board of Regents of Higher Education to offer students meeting the exit criteria of occupational training programs a Certificate of Completion or an Associate of Applied Science Degree in approved programs.

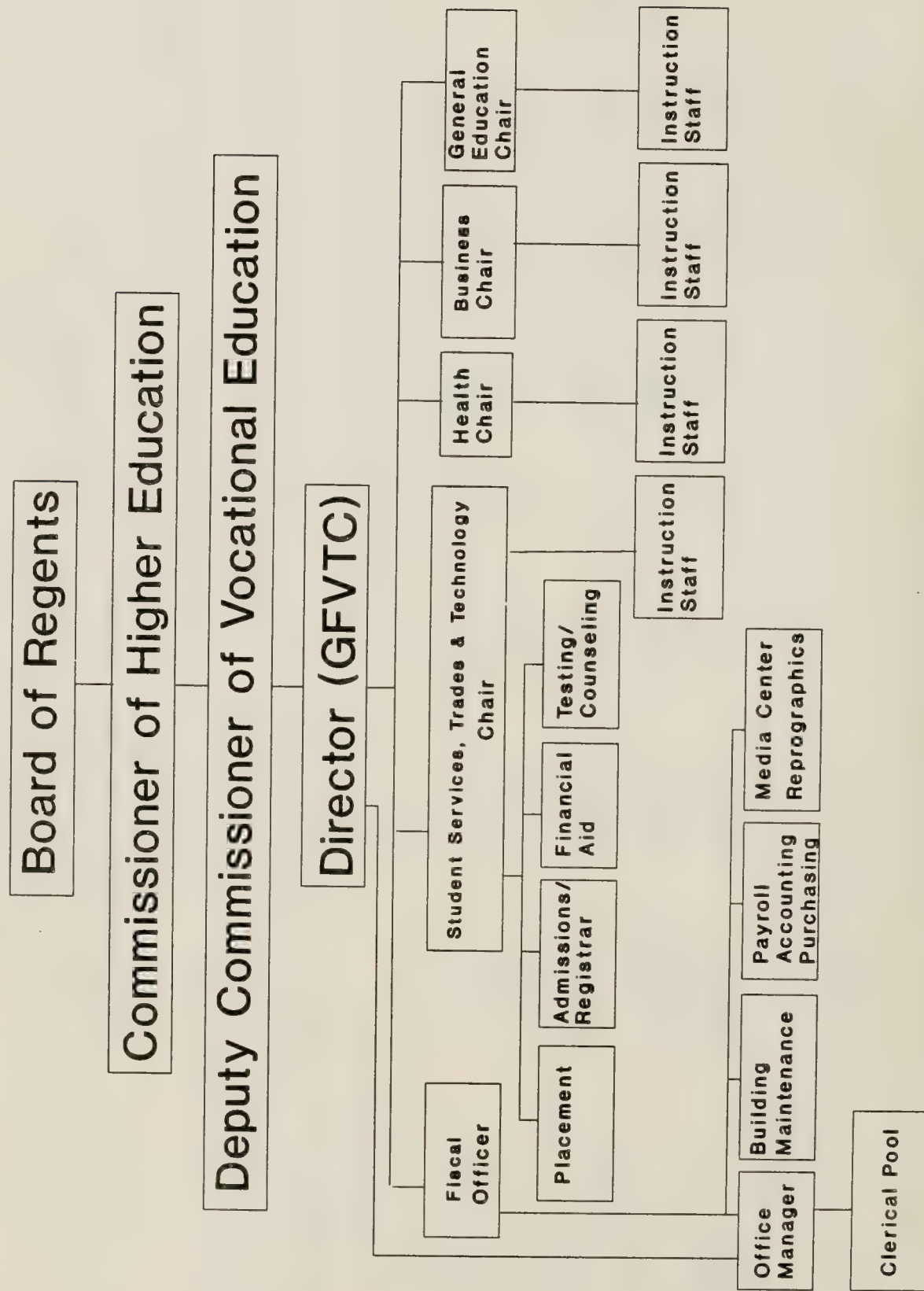
The Center seeks to fulfill this mission through a strong commitment to excellence in program design and delivery and to the belief that access to lifelong learning opportunities is vital in a rapidly changing technological society.

Until FY 1989 the Great Falls Vocational-Technical Center was governed by The Office of Public Instruction, locally via the Great Falls Public School District. Effective the beginning of FY 1990 the Center's transference of the governance to the Board of Regents of the Montana University System was completed.

The primary focus of the Center is recruitment and retention of students to fulfill its mission. Student enrollment at the Center has been in an upward trend beginning with the 1985-86 school year.



# ORGANIZATIONAL CHART



## **AGENCY ORGANIZATION**

The Agency is comprised of five integrated programs. The programs and functions of the Great Falls Vocational-Technical Center are carried out through the following major organizational components:

### **INSTITUTIONAL SUPPORT**

The Institutional Support Program consists of The Office of the Director, Chief Fiscal Officer and support staff reporting to them (see organizational chart). These offices provide policy formulation and implementation; maintain contact with the Office of the Commissioner of Higher Education, other state and federal agencies, the business community, and general public; perform the accounting, payroll and purchasing functions; and overall central administrative direction and function.

### **INSTRUCTION**

The instructional program consists of the following personnel: Curriculum Specialist, Department Heads, and the Instructional Staff. Major areas of instruction emphasis are: Business, Health, General Education, and Trade & Technology. The Department Chairs provides policy implementation to the instructional staff, is instrumental in development of new instructional programs, monitors the quality of ongoing programs, and serves as a liaison between the Office of the Director and Instructional Staff. Department Chairs provide feedback from the Instructional Staff and aide in implementing policy, monitoring ongoing programs, and development of new programs. The Instructional Staff provides instruction and academic advisement to the student.

### **ACADEMIC SUPPORT**

The Academic Support Program provides support to the instructional staff in three major areas, the Media Center, Reprographics Center, and clerical support for the instructional staff. The Media Center provides a multimedia source (books, publications, films, films strips, videos) for the student and instructional staff to supplement study and/or instruction. In addition, the Media Center monitors the placement of media delivery equipment, including distant learning and telecommunications, for the instructors. The Media Center is headed by a Library Technician who reports to the Chief Fiscal Officer.

The Reprographics Center serves as a print center. It performs duplication, copying and binding of informational materials for the student. The Reprographics Center is headed by a Duplication Machine Operator who reports to the Chief Fiscal Officer.

The other area in this program includes secretarial and clerical support.

### **STUDENT SERVICES**

The Student Services Program perform the functions of Recruitment, Admissions, Counseling, Career Assistance, Financial Aid, and Transcription of Grades of and for the student population. The program includes a Chairperson of Student Services, Registrar, Career Counselor, Financial Aid Specialist, and a support staff reporting to them. The duties of this program include policy implementation, Federal Financial Aid Program integrity, and maintenance of student records.

### **PHYSICAL PLANT AND MAINTENANCE**

The Physical Plant and Maintenance Program consists of Maintenance Worker IV (Lead Engineer) and a support staff. The Lead Engineer reports to the Fiscal Officer. The lead engineer and staff performs the janitorial and maintenance duties to ensure the building and contents and surrounding grounds are clean, attractive, performing to expectations, free of hazards, safe and secure.

# INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	37.00	37.00	41.10	-1.45	39.65	-95	39.65
Personal Services	1,078,959.74	1,093,511	1,093,538	129,962	1,223,500	130,751	1,224,387
Operating Expenses	66,121.30	156,694	123,366	40,830	164,196	39,006	163,296
Equipment	82,810.65	60,807	60,807	-60,807	0	-60,807	0
Debt Service	15,264.00	0	0	0	0	0	0
Total Agency Costs	\$1,243,155.69	\$1,311,012	\$1,277,711	\$109,985	\$1,387,696	\$108,950	\$1,387,683
Current Unrestricted Fund	1,243,155.69	1,311,012	1,277,711	109,985	1,387,696	108,950	1,387,683
Total Funding Costs	\$1,243,155.69	\$1,311,012	\$1,277,711	\$109,985	\$1,387,696	\$108,950	\$1,387,683

## INSTRUCTIONAL PROGRAM

The Instructional Program is comprised of a Curriculum Specialist, four Department Chairs and the Instructional Staff. Classes are taught traditionally from 8 a.m. to 4 p.m. daily. Extended day offerings and workshops are generally offered from 4 p.m. to 10 p.m. on a weekly, twice per week, and daily basis. Off campus instructional sites include Malmstrom Air Force Base and area businesses.

The Great Falls Vocational-Technical Center is presently working with the extended campus of Northern Montana College to offer dual channel courses. Regent approved dual channel courses may be transferred between Northern Montana College and Great Falls Vocational-Technical Center.

The Great Falls Vocational-Technical Center offers the following instructional programs in which Applied Associates of Science Degrees are issued:

Health Occupations  
Respiratory Therapy Care  
Occupational Therapy Assistant

The Great Falls Vocational-Technical Center offers the following instructional programs in which Certificates of Completion are issued:

Business Occupations  
Administrative Assistant, Secretary  
Bookkeeping/ Accounting  
Business Management/ Entrepreneurship

Data Entry/ Computer Operations  
Dental Receptionist

General Office Assistant  
Legal Office Assistant/ Transcriptionist  
Medical Secretary  
Medical Transcriptionist  
Microcomputer Management  
Word Processing Operator

Health Occupations  
Child Care Specialist  
Dental Assistant  
Emergency Medical Technician  
Nurse Attendant/ Orderly/ Home Health Aide  
Practical Nurse  
Respiratory Care Technician  
Respiratory Care Therapist

Trade and Technology  
Auto Body Repair and Refinishing  
Commercial Cook/ Food Management  
Jewelry, Watchmaking, and Microprecision Technology  
Interior Design Technology

The goals of the Instructional Program are to:

Provide student-centered instruction that seeks to aid individuals in their educational endeavors while fostering quality performance;



Maintain innovative programs which are responsive to the contemporary educational and occupational training needs of the community, region, and state;

Design coursework to develop human relations, communications, and computation skills as well as effective work attitudes, safety and environmental awareness and other qualities essential for occupational success;

Commit to the philosophy of providing life-long learning opportunities which are accessible to individuals who desire to pursue post-secondary education and occupational training;

Provide opportunities for continuous professional growth for all members of the faculty to further their professional development and to ensure the effectiveness of the total educational program;

The Department Chairs provides policy implementation to the instructional staff; is instrumental in development of new instructional programs; monitors the quality of ongoing programs; and serves as a liaison between the Office of the Director and Instructional Staff. The Instructional Staff provides instruction and academic advisement to the student.

#### **ADJUSTMENTS TO BASE**

As a result of a negotiated agreement with the Instructional Staff, the Agency has realized an increase in Personal Services in the area of compensation and related benefits. The agreement calls for 2.5% raise annually (FY 90 & 91) plus \$480 and \$438, respectively for fiscal year ending June, 1990 and 1991. This has resulted in a higher base in Personal Services area entering the 1992-1993 biennium.

# ACADEMIC SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	6.00	6.00	6.00	.15	6.00	.15
Personal Services	96,366.58	109,977	96,562	1,900	96,578	1,884
Operating Expenses	41,716.08	40,710	41,738	885	41,843	780
Equipment	3,611.50	7,900	5,000	-1,309	5,000	-1,309
Total Agency Costs	<u>\$141,694.16</u>	<u>\$158,587</u>	<u>\$143,300</u>	<u>\$1,476</u>	<u>\$143,421</u>	<u>\$1,355</u>
Current Unrestricted Fund	141,694.16	158,587	143,300	1,476	143,421	1,355
Total Funding Costs	<u>\$141,694.16</u>	<u>\$158,587</u>	<u>\$143,300</u>	<u>\$1,476</u>	<u>\$143,421</u>	<u>\$1,355</u>

## STUDENT SERVICES

The Student Services Program perform the duties of Recruitment, Admissions, Counseling, Career Assistance, Financial Aid, Placement, and Transcription of Grades of and for the student population. The program consists of a Chairperson of Student Services, Registrar, Career Counselor, Financial Aid Specialist, Placement Officer, and support staff reporting to them. The duties of this program include policy implementation, Federal Financial Aid Program integrity, placement and follow-up of graduates, and retention of student academic records.

## GOALS

The goals of the Student Services Program are to:

- Create a nondiscriminatory environment of equal educational opportunity through counseling and guidance services designed to assist students in achieving their individual educational and occupational goals;
- Exhibit integrity and responsibility in advertising, student recruitment, and representation of institutional status;

## ADJUSTMENT TO BASE

This program is represented by two different union employment contracts, The Instructional Staff and Vo-Tech Support Staff.

As a result of a negotiated agreement with the Instructional Staff, the Agency has realized an increase in Personal Services in the area of compensation and related benefits. The agreement calls for 2.5% raise annually (FY 90 & 91) plus \$480 and \$438, respectively for fiscal year ending June, 1990 and 1991. This has resulted in a higher base in Personal Services area entering the 1992-1993 biennium.

In addition, the number of days covered by the contract decreased from 190 days to 170 days for fiscal years ending in June, 1990 & 1991, resulting in a higher daily rate. Hence, the salary for individuals outside of the generally adopted year (ie. summer session) whose responsibilities are not tied to the classroom will rise accordingly above the previously mentioned salary increase.

# STUDENT SERVICES

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	5.50	5.50	7.50	-2.40	7.50	-2.40
Personal Services	141,806.17	127,188	127,208	17,681	127,224	17,665
Operating Expenses	26,414.11	1,734	18,280	8,708	18,297	8,691
Equipment	0.00	7,900	0	0	0	0
<b>Total Agency Costs</b>	<b>\$168,220.28</b>	<b>\$136,822</b>	<b>\$145,488</b>	<b>\$26,389</b>	<b>\$145,521</b>	<b>\$26,356</b>
Current Unrestricted Fund	168,220.28	136,822	145,488	26,389	145,521	26,356
<b>Total Funding Costs</b>	<b>\$168,220.28</b>	<b>\$136,822</b>	<b>\$145,488</b>	<b>\$26,389</b>	<b>\$145,521</b>	<b>\$26,356</b>
				<b>\$171,877</b>		<b>\$171,877</b>
				<b>\$171,877</b>		<b>\$171,877</b>

## ACADEMIC SUPPORT

The Academic Support Program provides support to the instructional staff in two major areas, the Media/ Reprographics Center and clerical support for the instructional staff. The Media Center provides a multimedia source (books, publications, films, films strips, videos) for the student and instructional staff to supplement study and instruction, respectively. In addition, the Media Center monitors the placement of media delivery equipment, including distant learning and telecommunications, for the instructors. The Media Center is headed by a Library Technician who reports to the Chief Fiscal Officer.

The Reprographics Center of the Media Center serves as a print center to supplement the instruction staff. It performs duplication, copying and binding of handout materials for the student. The Reprographics Center is headed by a Duplication Machine Operator who reports to the Chief Fiscal Officer.

The other area in this program includes secretarial and clerical support to the instructional staff.

## GOALS

The goal of the Academic Support Program is to:

- Produce cost efficient, cost productive copies, and error free support to the student via such support to the Instructional Staff.

## ADJUSTMENTS TO BASE

As a result of a negotiated agreement with the Vocational-Technical Support Staff, the Agency has realized an increase in the area of compensation and related benefits. The agreement calls for a 2.5% raise annually. This has resulted in a higher base in Personal Services area entering the 1992-1993 biennium.



# INSTITUTIONAL SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	4.00	4.00	5.00	.10	5.00	.10
				5.10		5.10
Personal Services	183,416.64	137,133	158,597	28,808	158,613	28,792
Operating Expenses	39,410.94	40,577	38,915	1,353	39,073	1,195
Equipment	0.00	9,685	0	0	0	0
Total Agency Costs	\$222,827.58	\$187,395	\$197,512	\$30,161	\$197,686	\$29,987
				\$227,673		\$227,673
Current Unrestricted Fund	222,827.58	187,395	197,512	30,161	197,686	29,987
Total Funding Costs	\$222,827.58	\$187,395	\$197,512	\$30,161	\$197,686	\$29,987
				\$227,673		\$227,673

## INSTITUTIONAL SUPPORT

Provide technical assistance to other post-secondary institutions in order to foster professional growth and educational excellence throughout the system;

Develop collaborative relationships with other post-secondary institutions, public and private, to provide beneficial and accessible educational opportunities and to ensure the most effective and responsible use of resources;

## ADJUSTMENTS TO BASE

Per recommendation of the Office of the Commissioner of Higher Education, exempt employees having Regent Employment Contracts a 2.5% increase in base salary and related benefits has been built in to the 1991 base year. This has resulted in an increase different than the classified employees.

## GOALS

The goals of the Institutional Support Program are to

Provide a carefully planned administrative organization which coordinates all its resources effectively toward the accomplishment of the institutional mission and objectives;

Monitor the progress of each program on its attainment of goal accomplishment in respect to the overall institution;

Give direction and implementation to all efforts in achieving the intent of recommendations of all accrediting boards;

Actively seek community involvement and support through interaction with advisory boards and professional organizations to ensure instruction is timely and the most current possible;

## PLANT OPERATION & MAINTENANCE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992 Base	Fiscal 1992 Incr/Decr Recommended	Fiscal 1993 Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	4.50	4.50	5.00	.00	5.00	.00
Personal Services	95,949.09	122,154	122,411	709	122,495	123,217
Operating Expenses	145,435.09	135,727	130,800	-471	129,467	142,544
Equipment	22,036.00	13,572	13,572	0	13,572	0
<b>Total Agency Costs</b>	<b>\$263,420.18</b>	<b>\$271,453</b>	<b>\$266,783</b>	<b>\$238</b>	<b>\$265,534</b>	<b>\$265,761</b>
Current Unrestricted Fund	263,420.18	271,453	266,783	238	265,534	265,761
<b>Total Funding Costs</b>	<b>\$263,420.18</b>	<b>\$271,453</b>	<b>\$266,783</b>	<b>\$238</b>	<b>\$265,534</b>	<b>\$265,761</b>

## PHYSICAL PLANT AND MAINTENANCE

The Physical Plant and Maintenance Program consists of Maintenance Worker IV (Lead Engineer) and a support staff reporting to him. The Lead Engineer reports to the Fiscal Officer. The Lead Engineer and Support Staff Physical Plant and Maintenance performs the janitorial and maintenance duties to ensure the building and contents and surrounding grounds are clean, attractive, and performs to expectations free of hazards, safe, and secure.

## GOALS

**The goal of the Physical Plant and Maintenance Program is:**

**Maintain physical facilities that are barrier free, attractive, comfortable, and adequate to support instructional programs, staff and student needs.**

## ADJUSTMENTS TO BASE

As a result of a negotiated agreement with the Custodial Staff, the Agency has realized a drop in Personal Services. Beginning in July, 1989, the GFVTC came under the governance of the Montana Board of Regents. Prior to that time, the Agency was with the Great Falls Public School District. Under the local school district, the custodial staff's hourly wages were from \$9.09 to \$11.13. In line with the negotiated agreement, custodial staff salaries are now \$7.22 through involved.

**PLEASE NOTE:**

Although the above results in a drop in personal services, the total savings does not stop in this category. Since the Great Falls Public School District supported the GFVTC with "in-kind" (ie. painting, snow removal, plumbing, electrical, and carpentry) services, the Vo-Tech is now having to pay for these services to outside third parties, ending in additional operating costs in the 2000 level services of expenses within this program. This added burden has not been reflected in operating expenses but should be taken into consideration for future budget planning and preparation.

AGENCY #3513  
AGENCY NAME-GREAT FALLS VOCATIONAL-TECHNICAL CENTER  
(GFVTC)  
PROGRAM NUMBER #00  
PROGRAM NAME-REVENUE  
FISCAL YEAR ENDING JUNE,1991  
AREAS OF IMPACT OF PRIMARY CONCERN: AGENCY WIDE

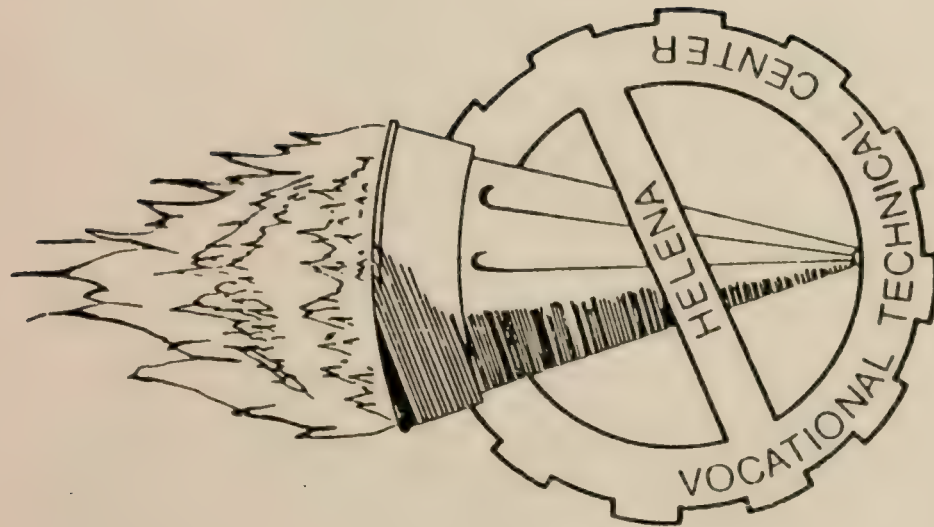
A portion of the state appropriated money contains Carl D. Perkins Funds. Perkins Funds are a federal grant available to educational institutions for providing vocational-technical educational opportunities. It can be debated and the question has been raised whether the state can appropriate these funds as unrestricted vs restricted, reference Section 17-2-103, MCA. The regents requested that Carl Perkins funds be changed to restricted funds and that the state general fund be increased by a like amount. Because of this, GFVTC doubts whether this source of state appropriated money will be available in the forthcoming biennium and beyond. To compensate for this uncertainty, the Agency has shown this source to be zero and for current unrestricted funds to be utilized in it's place. The dollar amount represented is \$153,821.







# Helena Vocational Technical Center







APPENDIX A  
HELENA VOCATIONAL-TECHNICAL CENTER  
NARRATIVE BUDGET JUSTIFICATION

TABLE OF CONTENTS

PAGE

AGENCY SUMMARY

1

ORGANIZATIONAL CHART

3

INSTRUCTION PROGRAM

4

ACADEMIC SUPPORT PROGRAM

5

STUDENT SERVICES PROGRAM

6

INSTITUTIONAL SUPPORT PROGRAM

7

PLANT/MAINTENANCE PROGRAM

8





# HELENA VO TECH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	60.00	60.00	59.00	-3.00	56.00	59.00	56.00
Personal Services	1,867,437.30	1,870,031	1,868,718	78,237	1,946,955	1,868,928	1,947,116
Operating Expenses	435,333.18	575,244	591,302	-19,907	571,395	591,568	571,713
Equipment	146,810.37	124,247	124,247	-1,589	122,658	124,247	122,658
Debt Service	11,844.00	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$2,461,424.85</b>	<b>\$2,569,522</b>	<b>\$2,584,267</b>	<b>\$56,741</b>	<b>\$2,641,008</b>	<b>\$2,584,743</b>	<b>\$2,641,487</b>
Current Unrestricted Fund	2,461,424.85	2,569,522	2,584,267	56,741	2,641,008	2,584,743	2,641,487
<b>Total Funding Costs</b>	<b>\$2,461,424.85</b>	<b>\$2,569,522</b>	<b>\$2,584,267</b>	<b>\$56,741</b>	<b>\$2,641,008</b>	<b>\$2,584,743</b>	<b>\$2,641,487</b>
Instruction	1,495,550.93	1,545,416	1,546,131	-32,853	1,513,278	1,546,858	1,513,494
Academic Support	242,558.50	221,112	221,274	40,794	262,068	221,425	262,068
Student Services	225,000.00	210,000	214,525	28,572	243,097	214,932	243,097
Institutional Support	207,269.91	188,072	201,263	22,680	223,943	201,377	223,943
Plant Operation & Maintenance	291,045.51	404,922	401,074	-2,452	398,622	400,151	398,885
<b>Total Program Costs</b>	<b>\$2,461,424.85</b>	<b>\$2,569,522</b>	<b>\$2,584,267</b>	<b>\$56,741</b>	<b>\$2,641,008</b>	<b>\$2,584,743</b>	<b>\$2,641,487</b>

## AGENCY SUMMARY

### 1. Nature of the Institution:

The Helena Vocational-Technical Center is a postsecondary technical institute offering the highest quality programs possible within the limits of space, personnel, and finances. Since its conception in 1939, the center has grown from a two program department to twelve programs. During this past year it served over 1,100 students.

All programs are occupationally specific in nature of no more than two years in length. The curriculum is industry validated and taught in a work-like environment.

### 2. Areas of Emphasis:

High quality instruction is offered in office education, trades and industry, technical, and health occupations. The mission of the programs are to provide pre-employment vocational and technical education in specified skills, retrain for employment, upgrade the employed, and community service. Each of the

program areas offer a general education core to include human relations, related communications, job preparation, and related mathematics. All these are relevant and comprehensive programs meeting the needs of industry for Montana and the greater region. The curricula is designed to meet the personal needs of each student to gain the knowledge and skills needed to be effective, useful members of a changing society.

Programs unique to the Helena center are Carpentry, Truck-Diesel Mechanics, and Aviation Maintenance Technology. The two divisions offering a majority of the programs are office and trade and industrial education.

### 3. Areas of Continuing Development:

The Helena Vocational-Technical Center will continue to offer general education and related instruction to prepare students for technological employment. The HVTC will continue to meet immediate and short-term training needs of industry and business within its major service area as well as to offer courses of instruction that meet continuing and stable market demands for technologically

skilled workers. The programs range from one to two years in length. The school is fully accredited by Northwest Association of Schools and Colleges.

#### 4. Degree Levels

The Helena Vocational-Technical Center offers Certificates of Completion leading to employment in a business or job recognized by industry, as well as Associate of Applied Science Degrees in Business Data Processing and Industrial Electronics.

#### 5. Constituencies Served:

The Helena Vocational-Technical Center provides open admission for residents of Montana who are sixteen years of age or older. Being located in the capital city, the Helena Vo-Tech Center places a great deal of emphasis on working with state, federal, and military agencies for upgrading and retraining of their employees. As a result, we have realized an older student population resulting in an increased number of part-time people. The average age during the 1988-89 school year was in excess of 30 years.

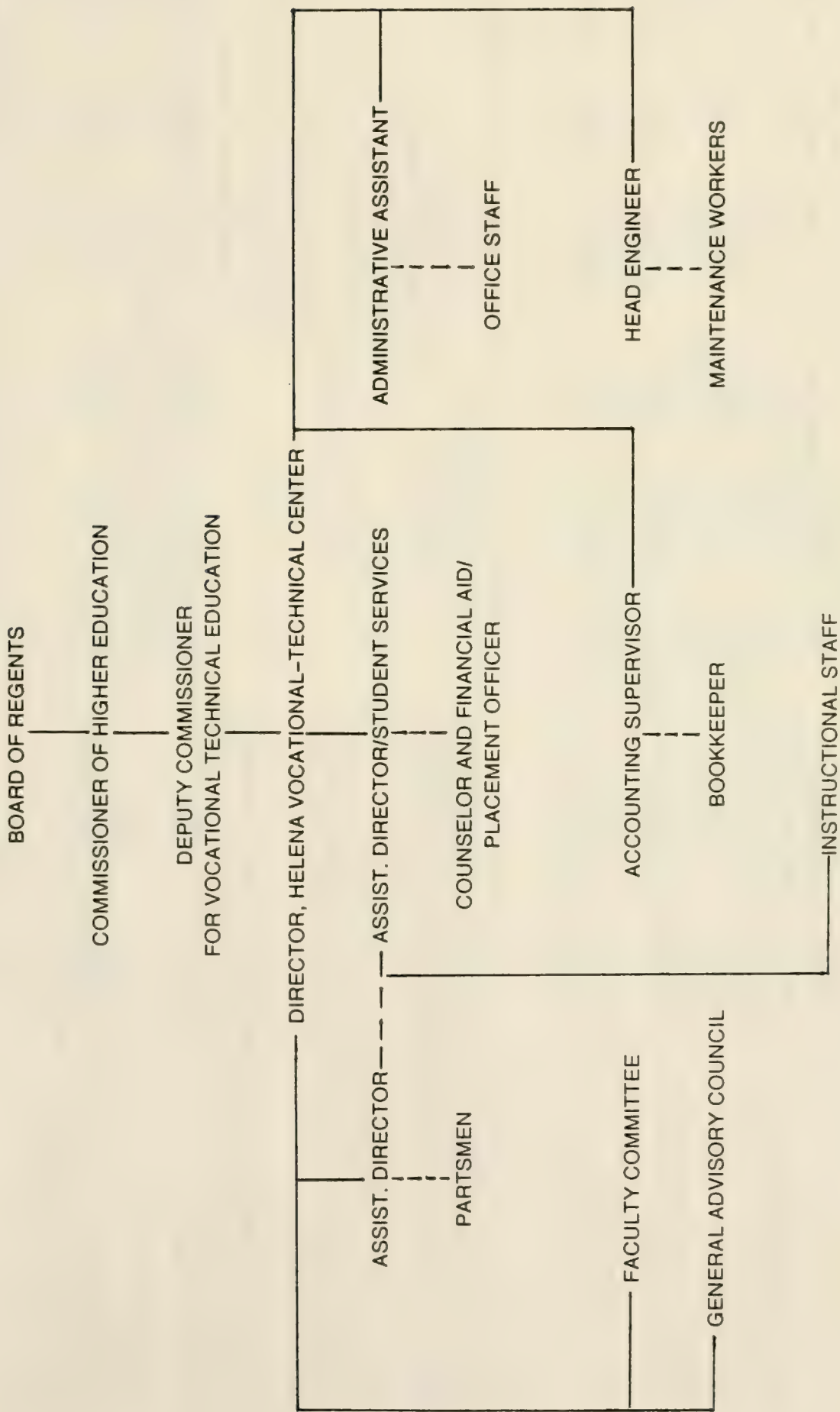
#### 6. Future Plans

The Center, through an affiliation with Montana State University, will work towards providing better educational opportunities to the Helena community. Currently Montana State University and the Helena Vo-Tech Center are exploring the feasibility of establishing a higher education center for graduate work as well as associated degrees for the vo-tech students. While there is an increasing demand for the Center to offer associate degrees, presently Business Data Processing and Industrial Electronics offer Associate of Applied Science Degrees and all other programs offer a certificate.

The Helena Vocational-Technical Center plans to develop articulation agreements wherever possible with the units of the university system to allow for transfer of credit. All programs need to prepare individuals for a labor force that is flexible and international in nature.

Some new programs to be pursued in the future will be biomedical technician, flight training, day care centers, cosmetology, avionics, and specific industry targeted programs such as Montana National Guard and state government.

# ORGANIZATIONAL CHART





# INSTRUCTION PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	37.34	37.34	37.34	-3.00	34.34	-3.00	34.34
Personal Services	1,252,909.97	1,286,211	1,286,247	-15,610	1,270,637	-15,481	1,270,853
Operating Expenses	121,937.85	187,203	187,882	-17,243	170,639	-17,883	170,639
Equipment	108,859.11	72,002	72,002	0	72,002	0	72,002
Debt Service	11,844.00	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b><u>\$1,495,550.93</u></b>	<b><u>\$1,545,416</u></b>	<b><u>\$1,546,131</u></b>	<b><u>\$-32,853</u></b>	<b><u>\$1,513,278</u></b>	<b><u>\$-33,364</u></b>	<b><u>\$1,513,494</u></b>
Current Unrestricted Fund	1,495,550.93	1,545,416	1,546,131	-32,853	1,513,278	-33,364	1,513,494
<b>Total Funding Costs</b>	<b><u>\$1,495,550.93</u></b>	<b><u>\$1,545,416</u></b>	<b><u>\$1,546,131</u></b>	<b><u>\$-32,853</u></b>	<b><u>\$1,513,278</u></b>	<b><u>\$-33,364</u></b>	<b><u>\$1,513,494</u></b>

## OVERVIEW

**The Center houses twelve vocational programs within the following areas:**

The Instructional Program budget provides funding for courses offered at the center. These range from traditional vocational technical classes to related instruction classes, to remedial and tutorial classes.

## GOALS

To provide our graduates with the technical skills and competencies necessary to become successful, contributing members of the community and the state of Montana.

To work with the business community and advisory councils to continually validate the appropriateness of the course offerings within each instructional program. Then incorporate this validation into the day-to-day instructional delivery.

## BASE PROGRAM

The Instructional Program budget provides funds for the delivery of instruction to our students. This includes faculty salaries, supplies and equipment used in the instruction of students, expenses for conferences, workshops, inservice, and committee work related to instruction.

Fifteen different certificates of completion are available within the above twelve program areas. Associate of Applied Science Degrees are offered in Industrial Electronics and Business Data Processing.

The FTE of 37.34 provide the classroom instructional delivery for the above programs.

AGRICULTURE  
HEALTH  
OFFICE

TECHNICAL  
TRADE & INDUSTRY

- Agri-Diesel Mechanics
- Practical Nursing
- Accounting/Bookkeeping
- Business Data Processing
- Secretarial

- Auto Mechanic Technician
- Carpentry
- Combination Welding
- Machine Shop
- Truck-Diesel Mechanic Tec

## ACADEMIC PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	Base
Full Time Equivalent Employees	7.66	7.66	7.66	.00	7.66	.00	7.66
Personal Services	185,363.11	153,533	153,547	46,726	200,273	46,709	200,273
Operating Expenses	32,280.34	35,580	35,728	-852	34,876	-986	34,876
Equipment	24,915.05	31,999	31,999	-5,080	26,919	-5,080	26,919
<b>Total Agency Costs</b>	<b>\$242,558.50</b>	<b>\$221,112</b>	<b>\$221,274</b>	<b>\$40,794</b>	<b>\$262,068</b>	<b>\$40,643</b>	<b>\$262,068</b>
Current Unrestricted Fund	242,558.50	221,112	221,274	40,794	262,068	40,643	262,068
<b>Total Funding Costs</b>	<b>\$242,558.50</b>	<b>\$221,112</b>	<b>\$221,274</b>	<b>\$40,794</b>	<b>\$262,068</b>	<b>\$40,643</b>	<b>\$262,068</b>

## OVERVIEW

The Academic Support Program budget funds are expended primarily to provide support of the Center's mission; instruction and public service.

It includes the provision of services that directly assist the academic functions of the Center, media such as audiovisual services and technology such as computing support, academic administration and personnel development providing administration support and management direction to the primary mission of the Center, budgeted support for course and curriculum development.

## GOALS

To provide overall academic policy direction and academic leadership for the Center in a manner consistent with the goals and objectives of vocational technical education in the state of Montana.

To provide the support services necessary to enable the academic programs to effectively and efficiently deliver services to students.

## BASE PROGRAM

The Academic Support Programs budget provides funds to support the academic program delivered to our students. This includes salaries, supplies and equipment.

An FTE of 7.66 is included in this support.

# STUDENT SERVICES PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	4.00	4.00	4.00	.00	4.00	.00	4.00
Personal Services	165,495.40	165,000	165,000	13,807	178,807	13,799	178,807
Operating Expenses	58,529.60	45,000	49,525	13,712	63,237	13,313	63,237
Equipment	975.00	0	0	1,053	1,053	1,053	1,053
Total Agency Costs	\$225,000.00	\$210,000	\$214,525	\$28,572	\$243,097	\$28,165	\$243,097
Current Unrestricted Fund	225,000.00	210,000	214,525	28,572	243,097	28,165	243,097
Total Funding Costs	\$225,000.00	\$210,000	\$214,525	\$28,572	\$243,097	\$28,165	\$243,097

## OVERVIEW

The Student Services office is responsible for activities in the following areas:

### ADMISSIONS

Recruitment Applications

Catalogues

Fee Schedules

Enrollment

Add/Drop Classes

Withdrawals from school

### PLACEMENT

Career Information

Placement Information

Job Seeking Assistance

Statistics

### REGISTRAR

Student Records

Transcript Requests

Credit Transfer

### FINANCIAL AID

Financial Aid Applications

Financial Assistance

Programs

Grants/Loans

Work Study

Agency Assistance

Veterans' Educational

Benefits

Scholarships

### COUNSELING

Career Advisement

Personal Counseling

Academic Advisement

Testing

### PUBLIC INFORMATION

Community Activities

Marketing

Promotions

## GOALS

Our purpose is to serve students and create public awareness for the Center through advertising, service club presentations, recruiting, participation in high school Career Day activities and supervise student government organization and its activities.

Once a student indicates an interest in enrolling in HVTC we provide the necessary services for them to have a positive educational experience for all activities outside of instruction.

### BASE PROGRAM

The budget supports these activities and an FTE of 4.0 provides the necessary personal services.



## INSTITUTIONAL SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	5.00	5.00	5.00	.00	5.00	.00
Personal Services	161,285.67	163,072	161,456	12,803	161,468	12,791
Operating Expenses	43,728.24	25,000	39,807	7,439	39,909	7,337
Equipment	2,256.00	0	0	2,438	0	2,438
<b>Total Agency Costs</b>	<b>\$207,269.91</b>	<b>\$188,072</b>	<b>\$201,263</b>	<b>\$22,680</b>	<b>\$201,377</b>	<b>\$223,943</b>
Current Unrestricted Fund	207,269.91	188,072	201,263	22,680	201,377	22,566
<b>Total Funding Costs</b>	<b>\$207,269.91</b>	<b>\$188,072</b>	<b>\$201,263</b>	<b>\$22,680</b>	<b>\$201,377</b>	<b>\$223,943</b>

## OVERVIEW

This program includes expenditures for: (1) central executive level activities concerned with management and long-range planning of the entire institution; (2) fiscal operations; (3) employee personnel and records; and (4) logistical activities that provide purchasing and maintenance of supplies and materials, printing, etc., services to the institution.

## GOALS

- To provide management/fiscal services necessary to effectively and efficiently support the Center's educational mission.
- To implement long-range planning activities to identify and mitigate major issues facing the institution.

## BASE PROGRAM

The Institutional Support program provides the policy making, administrative, clerical, and personnel support for the Center. The purpose of the Institutional Support Program is to provide support services to enable the Center to most effectively and efficiently provide services to the Center's students, faculty and staff. The objectives for each subactivity are as follows:

The Director's Office performs policy-making and administrative funding for the Center.

The Fiscal Office performs all administrative services for the Center including accounting, budgeting, purchasing, financial aid disbursement, cashiering, disbursing mail, payroll, personnel and central supplies.

The Institutional Support Program is funded by general funds, mandatory millage and student tuition/fee assessments and supports these activities, supplies, equipment, and an FTE of 4.0.

# PLANT/MAINTENANCE PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	6.00	6.00	5.00	.00	5.00	5.00
Personal Services	102,383.15	102,215	102,468	20,511	102,554	122,924
Operating Expenses	178,857.15	282,461	278,360	-22,963	277,351	255,715
Equipment	9,805.21	20,246	20,246	0	20,246	20,246
Total Agency Costs	<u>\$291,045.51</u>	<u>\$404,922</u>	<u>\$401,074</u>	<u>\$-2,452</u>	<u>\$400,151</u>	<u>\$398,885</u>
Current Unrestricted Fund	291,045.51	404,922	401,074	-2,452	400,151	398,885
Total Funding Costs	<u>\$291,045.51</u>	<u>\$404,922</u>	<u>\$401,074</u>	<u>\$-2,452</u>	<u>\$400,151</u>	<u>\$398,885</u>

## OVERVIEW

This program includes all expenditures of current funds for the operation and maintenance of the physical plant. It does not include expenditures made from the institutional plant fund accounts. It includes all expenditures for operations established to provide services and maintenance related to campus grounds and facilities, utilities, fire protection, property insurance and similar items.

## GOALS

- To provide the support services necessary to efficiently operate and maintain the Center's physical plant;
- To identify and mitigate major maintenance/repair projects.

## BASE PROGRAM

The staff of this program provides custodial services, repairs and maintains the contents of the buildings occupied by the center. In addition, these facilities require irrigation and landscaping of the grounds as well as lawn mowing, snow removal, and parking lot maintenance. Since these facilities were built in the 1960's major maintenance/repair objects are now a major concern.









# Missoula Vocational Technical Center





# MISSOULA VO TECH

## TABLE OF CONTENTS

Agency Summary	Page 1
Instruction Program	Page 5
Academic Support Program	Page 6
Student Services Program	Page 7
Institutional Support Program	Page 9
Plant Operation and Maintenance Program	Page 11



# MISSOULA VO TECH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended	
Full Time Equivalent Employees	61.80	61.80	67.30	.00	67.30	.00	67.30
Personal Services	2,200,629.07	2,111,807	2,110,409	200,566	2,310,975	200,574	2,311,280
Operating Expenses	457,300.50	507,616	529,514	-49,455	480,059	-50,119	478,431
Equipment	54,787.17	132,499	132,499	-87,812	44,687	-87,812	44,687
<b>Total Agency Costs</b>	<b>\$2,712,716.74</b>	<b>\$2,751,922</b>	<b>\$2,772,422</b>	<b>\$63,299</b>	<b>\$2,835,721</b>	<b>\$62,643</b>	<b>\$2,834,398</b>
Current Unrestricted Fund	2,712,716.74	2,751,922	2,772,422	63,299	2,835,721	62,643	2,834,398
<b>Total Funding Costs</b>	<b>\$2,712,716.74</b>	<b>\$2,751,922</b>	<b>\$2,772,422</b>	<b>\$63,299</b>	<b>\$2,835,721</b>	<b>\$62,643</b>	<b>\$2,834,398</b>
Instruction	1,546,604.30	1,590,213	1,590,299	32,042	1,622,341	31,869	1,622,442
Academic Support	168,111.15	153,376	156,137	18,772	174,909	18,482	174,909
Student Services	295,421.43	301,584	301,130	6,238	307,368	6,208	307,368
Institutional Support	351,247.46	341,398	363,007	2,444	365,451	2,343	365,451
Plant Operation & Maintenance	351,332.40	365,351	361,849	3,803	365,652	3,741	364,228
<b>Total Program Costs</b>	<b>\$2,712,716.74</b>	<b>\$2,751,922</b>	<b>\$2,772,422</b>	<b>\$63,299</b>	<b>\$2,835,721</b>	<b>\$62,643</b>	<b>\$2,834,398</b>

## ROLE AND SCOPE STATEMENT

### Nature of the Institution

Missoula Vocational Technical Center is a two-year postsecondary, nonresidential educational institution providing opportunities in vocational and technical education. Vocational-technical education is a major factor in the growth, welfare, and economy of the local, state, regional, and national community. It is unique in that its frame of reference must be in occupational terms and dimensions. The needs of the individual, industry, and the community are considered when providing vocational-technical education opportunities and services. The Center offers instruction and services to meet present and emerging local, state, regional, and national occupational needs expressed by individuals, business, industry, and the community.

Students, instructors, administrators, and staff at the Center recognize the dignity and worth of the individual and believe that postsecondary education should be available to all who can benefit from it; that the Center should provide for students a period of intensive learning in a stimulating environment, and that vocational-technical education should be a rewarding experience that fosters the growth and well-being of all members of the community it serves.

Missoula Vocational Technical Center impacts both the social and economic structure of Missoula and the state. The social impact relates to the provision of vocational-technical education opportunities to a population that has need for the education. The satisfaction of this need reduces the potential of having to provide other societal services and enhances the participants' abilities to be contributors to the Missoula and state social and economic efforts. Further economic benefit is realized when employers receive needed employees from Center training programs. The opportunity to fill jobs with productive employees enhances an existing employer's business and also attracts potential employers.

### Areas of Emphasis

The Missoula Vocational Technical Center provides related and occupationally specific instruction to meet a diversity of employment needs. Related instruction includes courses in communication, computation, human relations, and science.

Occupationally-specific instruction is offered in the program areas of agriculture, business, computer and information sciences, engineering-related technologies, health, home economics, law, protective services and public affairs, and trade and industrial as identified by the Classification of Instructional Programs. Offerings



that are unique to Missoula Vocational Technical Center are:

- Commercial Truck Operation
- Fashion Merchandising
- Retail Merchandising
- Legal Assisting
- Microcomputing Systems and Applications
- Medical Reception
- Heavy Equipment Mechanics
- Heavy Equipment Operation
- Surgical Technology

Emphasis will be given to providing a variety of vocational-technical education opportunities rather than depth in any one program area. A variety of opportunities will better serve the demographic nature of Missoula, the surrounding area, and the state.

#### Areas of Continuing Development

Missoula Vocational Technical Center will continue to offer related and occupationally-specific instruction to prepare students for employment. It will continue to offer short-term programs and courses to satisfy immediate training needs of business and industry, as well as programs and courses which meet continuing and expanding employment demands. Missoula Vocational Technical Center will continue to participate in the process of developing relationships with other institutions to provide better educational opportunities and ensure the most effective and responsible use of resources.

#### Degree Levels

Missoula Vocational Technical Center awards certificates of completion and, with the approval of the Board of Regents of Higher Education, will award the Associate of Applied Science degree for appropriate programs.

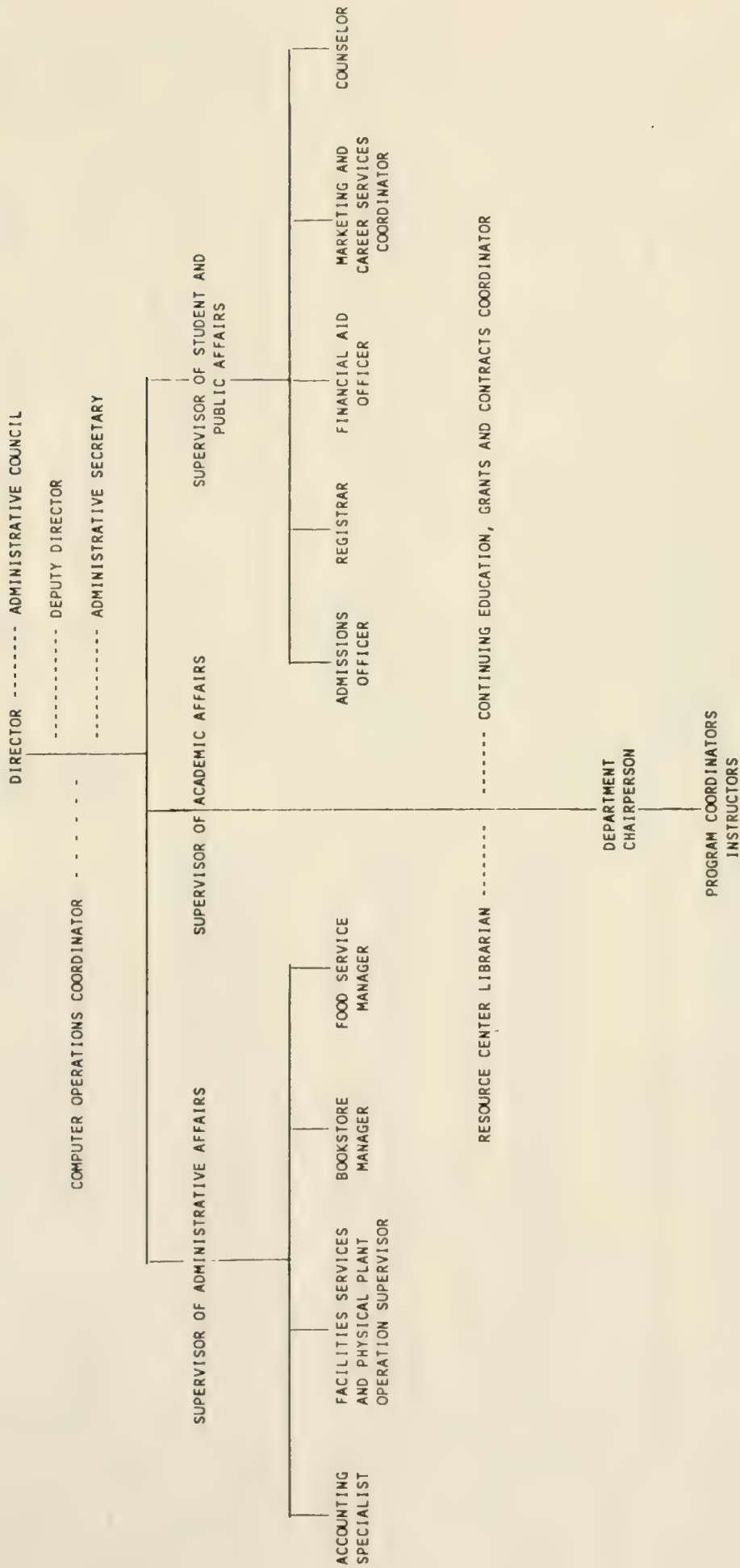
#### Constituencies Served

Missoula Vocational Technical Center provides open admission for those desiring to participate in vocational-technical education programs designed to prepare individuals to enter into employment, advance within their present employment, or prepare for a career change. In many cases, the population served is place bound with no opportunity to leave Missoula for educational endeavors. In addition, the Center serves the businesses and industries of Missoula County, its contiguous area, the State of Montana, and the northwest region of the United States.

#### Enabling Legislation

The Missoula Vocational Technical Center is designated in Section 20-16-106, MCA. The Board of Regents has general administrative and supervisory control over Vocational Technical Center education pursuant to Section 20-16-101, MCA.

# INSTITUTION ORGANIZATION



# INSTITUTIONAL ORGANIZATION

Missoula Vocational Technical Center is organized according to the structure recommended by the National Association of College and University Business Officers. An organizational chart is presented in Table 1.

The mission and functions of the Center are accomplished through the following major organizational components:

## Instruction

The Instruction Program includes all activity directly related to the instruction of students. Major budget components for this program include faculty salaries; educational supplies, materials, and equipment; and other expenses necessary to deliver instruction.

## Academic Support

Academic Support includes funds expended to provide support services for the institution's instructional program. Specific activities included are the library, media center, and faculty clerical pool.

## Student Services

Student Services includes all activities and services provided to students that are not instructional related. The four major components of the Student Services Program are admissions and registrar, guidance and counseling, career planning and placement, and student aid administration. Student Services is also responsible for student recruiting, student activities, student government, and student health services.

## Institutional Support

Institutional Support includes expenditures related to central administration of the Center. Major components of the Institutional Support Program include activities of the Director's Office, Academic Affairs' Office, and the Business Office. These offices provide policy formulation and program direction for all other institutional programs.

## Plant Operation and Maintenance

Plant Operation and Maintenance includes all expenditures of current operating funds for the operation and maintenance of facilities. Major components of this program include building maintenance, custodial services, expenditure for utilities, grounds maintenance, and major facility repair and renovation.

## BASE FUNDING

Base funding for the Center is provided by legislative appropriation. Funding sources include the state general fund; tuition and fees; a 1.5 mill levy on Missoula County; and federal vocational education funds. All revenue is deposited in the Center's primary operations pool. Funding for the various programs is derived by transferring funds from the primary operations pool.



# INSTRUCTION PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	36.30	36.30	40.34	.00	40.34	.00
Personal Services	1,388,493.74	1,317,613	1,317,515	146,716	1,317,607	146,725
Operating Expenses	126,626.69	196,878	197,062	-58,952	197,244	-59,134
Equipment	31,483.87	75,722	75,722	-55,722	75,722	-55,722
<b>Total Agency Costs</b>	<b>\$1,546,604.30</b>	<b>\$1,590,213</b>	<b>\$1,590,299</b>	<b>\$32,042</b>	<b>\$1,590,573</b>	<b>\$31,869</b>
Current Unrestricted Fund	1,546,604.30	1,590,213	1,590,299	32,042	1,590,573	31,869
<b>Total Funding Costs</b>	<b>\$1,546,604.30</b>	<b>\$1,590,213</b>	<b>\$1,590,299</b>	<b>\$32,042</b>	<b>\$1,590,573</b>	<b>\$31,869</b>

## OVERVIEW

The Instruction Program is the central focus of the Missoula Vocational Technical Center. Faculty within the program provide related and occupationally specific instruction designed to meet a diversity of employment needs.

## GOALS

- o To provide occupationally specific instruction which is directly oriented to the identified need of business and industry.
- o To provide instruction in a manner which utilizes available resources to their fullest potential.
- o To accommodate differing needs and abilities of the individual student within operational constraints.
- o To maintain a balance between program depth and diversity which will best serve the employment and economic base of Missoula, the surrounding area, and the state.

## AUTHORIZATION

See Enabling Legislation included under the Agency Role and Scope Statement.

## BASE PROGRAM

The Instruction Program provides direct instructional services to the students of Missoula Vocational Technical Center.

The Center's instructional staff of 40.34 F.T.E. will provide instruction to 706 students which represent 546 F.T.E. Students may select from 27 program options clustered within the five major departments of Electronics Technology, Industrial Technology, Business Technology, Culinary Arts, and Health Professions. In addition, the Related Studies Department offers courses in communication, computation, human relations and science to the general student population.

## BASE FUNDING

The Instruction Program is funded by transfer from the Center's primary operations pool. The primary operations pool is funded solely by legislative appropriation.

## ACADEMIC SUPPORT PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	5.23	5.23	5.23	.00	5.23	5.23
Personal Services	127,701.85	126,898	125,129	7,737	125,140	132,866
Operating Expenses	27,230.00	26,478	26,758	1,573	27,037	28,331
Equipment	13,179.30	0	4,250	9,462	4,250	13,712
Total Agency Costs	<u>\$168,111.15</u>	<u>\$153,376</u>	<u>\$156,137</u>	<u>\$18,772</u>	<u>\$156,427</u>	<u>\$174,909</u>
Current Unrestricted Fund	168,111.15	153,376	156,137	18,772	156,427	174,909
Total Funding Costs	<u>\$168,111.15</u>	<u>\$153,376</u>	<u>\$156,137</u>	<u>\$18,772</u>	<u>\$156,427</u>	<u>\$174,909</u>

## OVERVIEW

The Academic Support Program provides support services for the Center's Instructional Program. Specific activities included are the library, media center, and faculty clerical pool.

## GOALS

- To provide audio visual media and equipment required to support the instructional program.
- To coordinate and supervise activities of the Center's Duplicating Services and Central Stores operations.
- To provide clerical support to the Center's instructional faculty and staff.

## AUTHORIZATION

See Enabling Legislation included under the Agency Role and Scope Statement.

## BASE PROGRAM

The Academic Support Program consists of two major functions, the library/media center and faculty clerical support. Each function is described in more detail in the following paragraphs.

The library/media center is staffed by one (1) F.T.E. professional librarian and 1.23 F.T.E. clerical staff. The purpose of the library is to provide appropriate

print and nonprint materials to support the instructional programs of the Center and serve the general public of the Missoula community. Current holdings include approximately 7,500 volumes, 130 periodicals, 1,200 audio visual materials, and 80 pieces of audio visual equipment. In addition to providing library and instructional support the media center staff oversee a duplicating operation which produces approximately one million copies annually and a central stores operation with an annual volume of approximately \$15,000.

Faculty clerical support is provided to 40.34 faculty F.T.E. by 3.00 F.T.E. clerical staff. One secretary is housed in each of the Center's three facilities. In addition, to providing typing, filing, and audio visual assistance, the clerical staff also serve as the message and communications center for each facility.

## BASE FUNDING

The Academic Support Program is funded by transfer from the Center's primary operations pool. The primary operations pool is funded solely by legislative appropriation.

# STUDENT SERVICES PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	7.64	7.64	7.19	.00	7.19	.00
Personal Services	233,644.98	244,554	244,084	-991	243,093	-1,005
Operating Expenses	59,009.45	57,030	57,046	4,350	61,396	4,334
Equipment	2,767.00	0	0	2,879	2,879	2,879
<b>Total Agency Costs</b>	<b>\$295,421.43</b>	<b>\$301,584</b>	<b>\$301,130</b>	<b>\$6,238</b>	<b>\$307,368</b>	<b>\$6,208</b>
Current Unrestricted Fund	295,421.43	301,584	301,130	6,238	307,368	6,208
<b>Total Funding Costs</b>	<b>\$295,421.43</b>	<b>\$301,584</b>	<b>\$301,130</b>	<b>\$6,238</b>	<b>\$307,368</b>	<b>\$6,208</b>

## OVERVIEW

The Student Services Program includes all activities and services provided to students that are not instructional related. Major components of the program include: admissions and registrar; guidance and counseling; career planning and placement; student aid administration; promotion and recruitment; and other activities related to student health and welfare.

## GOALS

- To provide general and specific information about the Center and its programs to the student and the community, and to provide specific admission information to the prospective student.
- To provide a simple, effective, efficient, and equitable admission and registration system for the student.
- To establish a records management system which provides accurate, accessible, timely, and secure data.
- To provide information for reporting timely, accurate, reliable, and relevant student data to the Center, community, and state and federal agencies.
- To provide educational career guidance to students.
- To help the student plan a series of courses and activities which will move the student toward his/her educational goals.

- To provide a variety of placement services as an integral part of the educational process.

- To develop resources and provide financial aid for all needy Center students.

- To administer an effective objective, and fiscally sound financial aid program.

- To facilitate good public relations between the Center and the community.

- To promote and maintain those conditions which will permit and encourage each individual to realize optimal physical, emotional, intellectual, and social well-being.

## AUTHORIZATION

See Enabling Legislation included under the Agency Role and Scope Statement.

## BASE PROGRAM

The Student Services Program is organized around four (4) major components, each of which is discussed in the following paragraphs.

The Office of Admissions and Registrar is staffed by one (1) professional F.T.E. This office will accomplish on an annual basis, approximately the following numbers of transactions and services: process 800 applications for admission;



process 250 applications for graduation; fill 350 transcript requests; distribute 10,000 catalogs; administer 750 tests to prospective enrollees; process 1,200 student class schedule changes. In addition to the above activities the office maintains an average of 800 active student files, serves approximately 10,000 telephone clients, and 7,500 walk-in clients each year. The Admissions Office is also responsible for organizing and administering student orientation and preregistration activities each semester.

The Guidance and Counseling Office is staffed by one (1) professional counselor. The counselor is responsible for personal counseling, test interpretation, career advising, class scheduling, and dissemination of information regarding MVTC services. The counselor also provides extensive assistance to the Admissions Office in the areas of testing, orientation, registration, and student advising.

The Office of Placement and Promotion is responsible for developing student and graduate employment opportunities; assisting students individually and in groups with the development of job seeking skills, and coordination of the Center's promotion and publicity effort. The office lists approximately 700 full and part-time job openings each year. In addition, the office develops all Center publications, including the curriculum catalog, and coordinates and attends career fairs locally and throughout the state.

The Financial Aid Office is staffed by one (1) professional F.T.E. This office is responsible for the development and administration of all student aid resources including state and federal programs, as well as local scholarships and fellowships. The office will accomplish on an annual basis, approximately the following numbers of transactions and services: disburse 3,000 aid applications; receive and process 700 student needs analysis packages; disburse \$420,000 annually in Pell Grants to 344 students each semester; and, disburse \$600,000 in Stafford Loans. The office also administers the College Work Study program which provides employment to approximately 50 students each year.

Three (3) full time clerical F.T.E. provide support to the four (4) professional positions allocated to the Student Services Program. One (1) clerical F.T.E. is assigned solely to the Financial Aid Office, while the remaining two (2) F.T.E. are shared by the Admissions, Counseling, and Placement Offices. In addition to the full time clerical F.T.E., 19 part-time F.T.E. provide general assistance to all student services offices. The part-time individuals are primarily student employees, the majority of whom are employed through the College Work Study program.

## BASE FUNDING

The Student Services Program is funded by transfer from the Center's primary operations pool. The primary operations pool is funded solely by legislative appropriation.

# INSTITUTIONAL SUPPORT PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	5.63	5.63	7.14	.00	7.14	.00
Personal Services	272,189.27	251,804	253,391	29,805	283,196	29,788
Operating Expenses	75,121.19	50,491	74,763	3,396	78,159	3,312
Equipment	3,937.00	39,103	34,853	-30,757	4,096	-30,757
<b>Total Agency Costs</b>	<b>\$351,247.46</b>	<b>\$341,398</b>	<b>\$363,007</b>	<b>\$2,444</b>	<b>\$365,451</b>	<b>\$2,343</b>
Current Unrestricted Fund	351,247.46	341,398	363,007	2,444	365,451	2,343
<b>Total Funding Costs</b>	<b>\$351,247.46</b>	<b>\$341,398</b>	<b>\$363,007</b>	<b>\$2,444</b>	<b>\$363,108</b>	<b>\$2,343</b>
					<b>\$363,108</b>	<b>\$365,451</b>

## OVERVIEW

The Institutional Support Program includes all activity related to central administration of the Center. Major components of the program include the Director's Office, Academic Affairs Office, and Business Office. These offices provide policy formulation and program direction for all other institutional programs.

## GOALS

- o To provide educational and administrative leadership, within policy developed by the Board of Regents of Higher Education, to assure full development of the institution.
- o To organize the institution for the most effective and efficient use of resources to deliver appropriate instructional, related, and activity programs.
- o To assume responsibility for program and institution accreditation.
- o Organize, administer, and maintain effective personnel services to assure the institution is properly staffed and that existing staff is given maximum opportunity for personal and professional development within available resources.
- o To provide fiscal and other business related support to enable the institution to most effectively and efficiently carry out its stated mission.

## AUTHORIZATION

See Enabling Legislation included under the Agency Role and Scope Statement.

## BASE PROGRAM

The Institutional Support Program is organized within three (3) major components. Each of the components will be discussed in the following paragraphs.

The Director's Office is staffed with one (1) professional F.T.E. and one (1) clerical F.T.E. The office is responsible for overall policy direction and administrative control of the Center. In addition to general administration, the Director's Office serves as the personnel office for the institution.

The Academic Affairs Office is staffed with one (1) professional F.T.E. and is directly responsible for administration of the instructional program. Six (6) department chairpersons, the Librarian, and Coordinator of Continuing Education report directly to the Supervisor of Academic Affairs. The office is responsible for evaluation and development of the 40.34 F.T.E. instructional staff and supervision of the Academic Affairs Program. Additional responsibility includes coordination of 20 instructional program advisory committees with a total membership of approximately 150 representatives from business and industry.

The Business Office is staffed with one (1) professional F.T.E. and three (3) accounting related F.T.E. The office is responsible for administration and

control of all fiscal related activities, as well as the Center's physical plant. Additional responsibility includes supervision of the Center's auxiliary operations. The office processes approximately 750 purchase orders, 1,800 general warrants, and 3,000 payroll warrants annually. Business Office staff are also responsible for the Center's telephone system and mail room.

#### **BASE FUNDING**

The Institutional Support Program is funded by transfer from the Center's primary operations pool. The primary operations pool is funded solely by legislative appropriation.



# PLANT OPERATION & MAINTENANCE PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	7.00	7.00	7.40	.00	7.40	.00	7.40
Personal Services	178,599.23	170,938	170,290	17,299	170,453	17,340	187,793
Operating Expenses	169,313.17	176,739	173,885	178	172,360	75	172,435
Equipment	3,420.00	17,674	17,674	-13,674	17,674	-13,674	4,000
<b>Total Agency Costs</b>	<b>\$351,332.40</b>	<b>\$365,351</b>	<b>\$361,849</b>	<b>\$3,803</b>	<b>\$365,652</b>	<b>\$3,741</b>	<b>\$364,228</b>
Current Unrestricted Fund	351,332.40	365,351	361,849	3,803	360,487	3,741	364,228
<b>Total Funding Costs</b>	<b>\$351,332.40</b>	<b>\$365,351</b>	<b>\$361,849</b>	<b>\$3,803</b>	<b>\$360,487</b>	<b>\$3,741</b>	<b>\$364,228</b>

## OVERVIEW

The Plant Operation and Maintenance Program includes expenditures of current operating funds for building maintenance, custodial services, utilities, grounds maintenance, and major facility repair and renovation.

## GOALS

- o To provide facilities which are environmentally healthy and conducive to the Center's primary mission of instruction.
- o To implement a continuing program of preventive maintenance to maintain facilities in the best physical condition possible within available resources.
- o To provide security for all of the Center's physical resources.
- o To assist in the planning and implementation of long range campus development and maintenance plans.
- o To monitor all utility consumption to ensure all systems are operating at maximum efficiency.

## AUTHORIZATION

See Enabling Legislation included under the Agency Role and Scope Statement.

## BASE PROGRAM

The Plant Operation and Maintenance Program is staffed by six (6) full time and two (2) part time permanent employees. Students employed part time, primarily through the College Work Study Program, are also utilized. These temporary employees comprise an additional .40 F.T.E. Physical plant staff are responsible for maintaining four (4) facilities containing 135,000 square feet. The staff also maintains a grounds area of approximately 11 acres. The Center's facilities are at two (2) locations which are separated by a distance of three (3) miles. Administrative oversight and clerical support are provided by the Business Office staff.

## BASE FUNDING

The Plant Operation and Maintenance Program is funded by transfer from the Center's primary operations pool. The primary operations pool is funded solely by legislative appropriation.









# BOARD OF PUBLIC EDUCATION





# BOARD OF PUBLIC EDUCATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	-----
Full Time Equivalent Employees	4.00	4.00	4.00	.00	4.00	.00	4.00
Personal Services	129,382.49	125,523	126,623	268	126,891	267	126,870
Operating Expenses	60,403.94	61,817	65,142	2,984	68,126	2,985	68,174
Equipment	0.00	1,000	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$189,786.43</b>	<b>\$188,340</b>	<b>\$191,765</b>	<b>\$3,252</b>	<b>\$195,017</b>	<b>\$3,252</b>	<b>\$195,044</b>
General Fund	125,014.04	117,272	119,049	3,252	122,301	3,252	122,130
State Special Revenue Fund	64,772.39	71,068	72,716	0	72,716	0	72,914
<b>Total Funding Costs</b>	<b>\$189,786.43</b>	<b>\$188,340</b>	<b>\$191,765</b>	<b>\$3,252</b>	<b>\$195,017</b>	<b>\$3,252</b>	<b>\$195,044</b>
Administration	125,014.04	117,272	119,049	3,252	122,301	3,252	122,130
Advisory Council	64,772.39	71,068	72,716	0	72,716	0	72,914
<b>Total Program Costs</b>	<b>\$189,786.43</b>	<b>\$188,340</b>	<b>\$191,765</b>	<b>\$3,252</b>	<b>\$195,017</b>	<b>\$3,252</b>	<b>\$195,044</b>

## MISSION AND GENERAL DESCRIPTION

The Board of Public Education, created by Article X, Section 9 of the 1972 Montana Constitution, consists of seven voting members appointed by the Governor and confirmed by the Senate. The board is charged with exercising "general supervision over the public school system." The board is also designated by statute as the governing board of the Montana School for the Deaf and Blind. Together with the Board of Regents, the board does the general planning, coordinating and evaluation of the state's educational system. (Title 20, Chapter 2, MCA).

The Certification Standards and Practices Advisory Council to the Board of Public Education was created by the Fiftheth Legislature. The council consists of seven members appointed by the Board; these include one elementary teacher, one secondary teacher, one specialist, one teacher from an approved teacher education program of a Montana college or university, one school administrator and one school trustee.

The staff of the Administration program provide administrative, research, clerical functions and management of business affairs for all programs under the purview

of the Board of Public Education.

## Agency Organization

The programs and functions of the Board of Public Education are carried out through the following major organizational components:

The Board of Public Education consists of seven members appointed for seven years by the Governor. Together with the Board of Regents, the Governor and the Superintendent of Public Instruction, they make up the Board of Education for coordination and long range planning of all of education in Montana.

The Board of Public Education hires the Executive Secretary who in turn hires and supervises the rest of the Board staff. This staff provides all the administration, research and support responsibilities for the Board of Public Education and the Certification Standards and Practices Advisory Council.

The Board of Public Education also supervises the Montana School for the Deaf and Blind, a separate state agency, and hires the Superintendent of the School who, in turn, hires the rest of the MSDB staff.

# ADMINISTRATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	2.00	2.00	2.00	.00	2.00	.00
Personal Services	84,831.66	79,169	79,991	163	79,775	162
Operating Expenses	40,182.38	38,103	39,058	3,089	39,103	3,090
Total Agency Costs	<u>\$125,014.04</u>	<u>\$117,272</u>	<u>\$119,049</u>	<u>\$3,252</u>	<u>\$118,878</u>	<u>\$3,252</u>
General Fund	125,014.04	117,272	119,049	3,252	118,878	3,252
Total Funding Costs	<u>\$125,014.04</u>	<u>\$117,272</u>	<u>\$119,049</u>	<u>\$3,252</u>	<u>\$118,878</u>	<u>\$3,252</u>

## OVERVIEW

The Board of Public Education is constitutionally responsible for general supervision of the public school system. This includes establishing policies for the accreditation of schools, the certification of teachers, special education, gifted and talented programs, the equivalency of secondary education, distribution of state equalization, school bus and drivers, and school days and hours. The Board also accredits all schools annually, holds hearings to revoke or suspend teaching certificates, supervises the Montana School for the Deaf and Blind and provides administration to the Teacher Certification Standards and Practices Advisory Council.

## GOALS

To accredit schools.

To review teacher education programs and revise appropriate policies.

To hear cases to deny, suspend or revoke teaching certificates and revise appropriate rules.

To review and revise certification policies.

To meet special education responsibilities.

To meet gifted and talented responsibilities.

To review PIR Days policies and procedures.

To distribute state equalization aid.

To oversee school transportation.

To oversee student assessment.

To oversee equivalency of completion of secondary education.

To research alternatives to school day or week.

To meet Board of Education responsibilities.

To supervise the Montana School for the Deaf and Blind.

To provide administration and support services to the Certification Standards and Practices Advisory Council.

To oversee the administration of the Board office and staff.

To serve on state advisory councils, committees and as members of accreditation teams for teacher education programs.

To administer and/or provide research and technical assistance to such programs as are given by the Legislature, Governor, and Federal Government to the Board: a) HB28; b) Christa McAuliffe Fellowship; c) Pre-school Federal Legislation; d) Distance Learning; e) SB16; e) Governor's Century Plan Education Forums.

## **AUTHORIZATION**

ARTICLE X, Section 9 of the Montana Constitution establishes the Board of Public Education and sets forth its responsibilities.

TITLE 20 of the Montana Codes further defines the Board's responsibilities.

## **BASE PROGRAM**

The Board accredits all schools, certifies all teachers, adopts policies for special education and for gifted and talented programs, adopts rules for student assessment, approves or disapproves alternatives in a school's day or week, adopts policies and approval procedures for pupil-instruction related days, adopts rules for equivalency of completion of secondary education, and administers and orders the distribution of state equalization aid. Further, the Board of Public Education sets standards for school buses and drivers, prescribes criteria for the establishment of transportation service areas and prescribes additional criteria for the determination of the residence of a pupil. The Board's accreditation standards are the basis for eligibility for local school districts to receive state funds. Also, the Board hears cases regarding denial, suspension and revocation of teacher certificates and reviews teacher education programs leading to interstate reciprocity.

Board staff administers Board meetings, researches policy, collects reports and reviews and writes policy for consistency with statutes and rules, formats new or amended rules appropriately for the administrative codes, writes findings of fact and conclusions of law and order, keeps records of the Board's actions, provides testimony to the Legislature, determines fiscal notes for any changes in standards which impact local schools, and maintains liaison with the Superintendent of Public Instruction, the Commissioner of Higher Education, professional organizations and the public at large.

## **BASE FUNDING**

All operating and personnel expenses for the Board of Public Education are funded by the General Fund. From time to time the Board does administer grants from foundations.



## PERFORMANCE INDICATORS

	FY90 <u>Actu.</u>	FY91 <u>Enac.</u>	FY92 <u>Base</u>	FY93 <u>Base</u>
Board Meetings	9-2 day	9-2 day	7-2 day 2-3 day	7-2 day 2-3 day
School Accreditation	771	770	770	770
Accreditation of College Teacher Education Programs	2	2	2	2
Interim Legislative Committees Coordination				
Contested Hearings Denial, Suspension and Revocation	2	1	1	1
Rule Hearings	4	5	5	5
Contested Hearings for HB28	11	10	12	10
	0	4	4	4

## INCREASES FROM BASE

HB28 requires the Board to withhold funds from school districts which do not return reports to OPI or which do not meet accreditation standards. This will result in increased hearings. The cost of these hearings will result in increased attorney fees and extended Board meetings.

# CERTIFICATION STANDARDS & PRACTICES ADVISORY COUNCIL

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	2.00	2.00	2.00	.00	2.00	.00
Personal Services						
Operating Expenses	44,550.83	46,354	46,632	105	46,828	105
Equipment	20,221.56	23,714	26,084	-105	26,086	-105
	0.00	1,000	0	0	0	0
<b>Total Agency Costs</b>	<b>\$64,772.39</b>	<b>\$71,068</b>	<b>\$72,716</b>	<b>\$0</b>	<b>\$72,914</b>	<b>\$0</b>
State Special Revenue Fund						
<b>Total Funding Costs</b>	<b>64,772.39</b>	<b>71,068</b>	<b>72,716</b>	<b>0</b>	<b>72,914</b>	<b>0</b>
	<b>\$64,772.39</b>	<b>\$71,068</b>	<b>\$72,716</b>	<b>\$0</b>	<b>\$72,914</b>	<b>\$0</b>

## OVERVIEW

It is the responsibility of the Council to study and make recommendations to the Board in the following areas: teacher, administrator and specialist certification standards, including pre-certification training and education requirements and certification renewal requirements and procedures; the status and efficacy of approved teacher education programs in Montana; the feasibility of establishing standards of professional practices and ethical conduct; and policies relating to the denial, suspension, and revocation of teaching certification and the appeals process. The Council is to submit an annual report in writing with its recommendations in the above areas to the Board of Public Education.

## GOALS

To study and recommend policy changes in teacher, administrator and specialists certification standards to the Board of Public Education, especially the certification of early childhood and special education teachers.

To study and recommend policy changes in pre-certification training and education requirements, including utilization of the National Teachers Exam, to the Board of Public Education.

To study and recommend policy changes in certification renewal requirements and procedures to the Board of Public Education.

To study and recommend policy changes in denial, suspension and revocation of teacher certification and the appeals process.

To study and make recommendations on the status and efficacy of approved teacher education programs in Montana.

To study and make recommendations on the role of pre-schools in public education.

## AUTHORIZATION

2-15-1522 MCA Certification Standards and Practices Advisory Council.

## BASE PROGRAM

The Council meets at least four times a year for two days to study, hear presentations, hold informational hearings and make recommendations on all aspects of teacher certification and teacher education to the Board of Public Education. Committees meet at other times and hold conference calls. Members and staff make presentations and travel both in and out-of-state to gather information on policy needs appropriate for Montana educators.

The Board staff provides administrative, research and clerical duties to the council. It keeps records of the Council's action and maintains liaison with the Board of Public Education, Superintendent of Public Instruction, Commissioner of Higher Education, professional organizations and the public at large for the Council.

## BASE FUNDING

The income of the Certification Standards and Practices Advisory Council comes from a special revenue account in which \$3 for each teaching certificate per year is deposited to cover the Council's expenses. The funds are deposited with the Office of Public Instruction, who disperses the Council's portion to its account.

## PERFORMANCE INDICATORS

	<u>FY90 Actual</u>	<u>FY91 Enacted</u>	<u>FY92 Base</u>	<u>FY93 Base</u>
Council Meetings	4	4	4	4
Outside Presentations	21	25	25	25
Recommendations to Board on changes in ARM or MCA	5	5	5	5







# COMMISSIONER OF HIGHER EDUCATION





**COMMISSIONER OF HIGHER EDUCATION  
NARRATIVE BUDGET JUSTIFICATION  
1993 BIENNium**

Agency Summary	Page 1
Administration Program	Page 5
Student Assistance Program	Page 8
Education for Economic Security Program	Page 10
Community College Assistance Program	Page 11
MUS Group Insurance Program	Page 13
Talent Search Program	Page 15
Vo-Tech Appropriation Distribution Program	Page 17
Vo-Tech Administration Program	Page 19
Appropriation Distribution Program (MUS)	Page 22
Guaranteed Student Loan Program	Page 24
Board of Regents - Administration	Page 29
Board of Regents - Bond Payments	Page 31

# COMMISSIONER OF HIGHER EDUCATION

[illegible]



The Montana Board of Regents, at their March 22, 1990 meeting, adopted the following role and scope statement for post secondary education. This statement describes the mission of the state agency, "The Commissioner of Higher Education".

## **POST SECONDARY EDUCATION MISSION STATEMENT**

Under the Constitution of the State of Montana, the governance and control of the Montana University System are vested exclusively in the Board of Regents of Higher Education which has full power, responsibility, and authority to supervise, coordinate, manage, and control the Montana University System. In addition, the Board of Regents exercises programmatic oversight of Montana's three community colleges. The Board of Regents appoints, by constitutional mandate, a Commissioner of Higher Education as the chief administrative officer of the Montana University System. In 1987, the Legislature vested the Board of Regents with general administrative oversight and supervision of post-secondary vocational-technical education. The Commissioner of Higher Education serves as chief administrative officer for post-secondary vocational-technical education in Montana.

As public servants of the State of Montana, the Regents and Commissioner are obligated to exercise several principal responsibilities on behalf of the citizens:

### **COORDINATION FOR THE MAINTENANCE OF DIVERSITY AND ACCESS**

Fundamentally, all units of public post-secondary education exist to serve the educational, social, and campus environmental needs of a diverse student population not bounded by the traditional definition of college-age students. It is reasonable for these Montanans to expect a wide range of instructional programs in their institutions of higher learning. College-bound and vocational-technical students should find available in Montana academic and technical disciplines commensurate with those found in other states. Generally, undergraduates, and vocational-technical students should not have to leave Montana to pursue programs of study because they are unavailable in the State.

In cases where a particular program of study is not offered in Montana, the Regents will make every effort to secure access to such a program in another state through interstate cooperative arrangements.

To be sure, not all programs can be made available on each college campus or vocational-technical center. However, the Board of Regents must be cognizant of educational needs in all areas of the State and endeavor to provide reasonable access to as many programs as possible for as many qualified citizens as possible. This effort should involve, when feasible, state-of-the-art technology for distance learning and the development of nontraditional modes for the delivery of courses and programs.

For reasons of economy and necessity, public expectations for diversity must necessarily narrow when considering graduate education. Master's programs should be initiated and continued only when needs, resources, and institutional mission so dictate. Doctoral programs should be very limited in number and scope. They should not be initiated or continued if resources are inadequate to permit regional and/or national reputations of high quality as determined by appropriate external reviews.

The Board of Regents has the responsibility for coordinating the delivery of public post-secondary education in Montana. Accordingly, the System must set the proper role and scope configuration of programs at each campus, determine statewide educational needs, and provide leadership and support to the several campuses in meeting these needs. The Regents must be mindful of economic limitations and wary of unnecessary duplication.

### **ASSURANCE OF QUALITY**

Through careful and regular review of programs in both vocational-technical and academic areas, the Board of Regents assures high educational standards in all public post-secondary institutions. Further, the Regents seek to provide institutional budgets that are consistent with the maintenance and enhancement of high quality instruction, research, and public service.



In cooperation with secondary schools in Montana, the Montana University System establishes appropriate statewide standards for admission to post-secondary education. Minimum admission standards improve the preparation of college-bound students and provide to students assurances of increased likelihood of success. In addition, through various scholarship programs, the Montana University System seeks to attract outstanding Montana high school students to one of the several campuses.

The Board of Regents, in concert with the several campuses and centers, has the responsibility of providing leadership in helping to attract and retain outstanding faculty, staff, and administrators. This is to be done through improved salaries, better working conditions, and professional development opportunities.

### ACCOUNTABILITY TO THE PUBLIC

Montana citizens have over the years placed a high priority on public higher education and, therefore, have a right to proper accounting for the actions and expenditures of the Montana University System and the post-secondary vocational-technical education centers in the State. Accordingly, the Board of Regents makes public explanations of activities, expenditures, and discharge of responsibilities.

The Regents exercise their responsibility to be accountable in several ways. First, they require that all institutions achieve and maintain accreditation by the Northwest Association of Schools and Colleges. Second, the Montana University System encourages, and in some cases requires, specific program accreditation. Third, the Regents are responsible for monitoring learning accomplishments of students and professional accomplishments of faculty. Finally, the Board of Regents must provide appropriate reports of financial expenditures. The best system of education exists when the greatest possible results are achieved with the most efficient expenditure of the taxpayers' investment. The Regents have committed themselves to this ideal and seek always to provide explanations and assurances to the citizens that their funds are being prudently expended.

### SEEK ADEQUATE AND STABLE FUNDING

Inasmuch as excellent higher education is essential for the cultural, economic, and social well being of Montana, it is imperative that funding for higher

learning in Montana be adequate and stable. Consequently, it is an obligation of the Board of Regents to advise the legislative and executive branches on fiscal challenges and opportunities facing higher education. Undeniably, it is a primary responsibility of the Board of Regents to be staunch and committed advocates of adequate educational funding. To that end, the higher education community must stand ready to provide accurate, broadly-based data to be used in the construction of a tax structure for all state purposes. In addition, the Board of Regents has the responsibility of seeking creative funding alternatives to supplement state revenues. These would include but not be limited to institutional partnerships with private businesses and industry, aggressive fund raising efforts from both private and public agencies, and internal reallocations that eliminate unnecessary expenditures and assure funding for programs of high quality, priority, and demand.

### ENHANCEMENT OF ECONOMIC, ENVIRONMENTAL, AND CULTURAL WELL-BEING OF MONTANA

Through its many programs in teaching, research, and public service, post-secondary education has the responsibility of making Montana a better place to live. Continuation of the State's economic growth will be increasingly dependent upon its ability to meet the demands of existing commercial enterprises and new industries seeking to locate within its borders. Higher education opportunities for managers, scientists, and technicians must come largely from the colleges, universities, and vocational-technical centers. Moreover, the development of new products can be enhanced through expanded research capabilities within the Montana University System. Low-cost counsel to nascent businesses and assistance in the transfer of technology from laboratory to factory to marketplace are proper obligations of the campuses and vocational-technical centers.

Montana has been blessed with a splendid natural environment--clean air and water, abundant wildlife, verdant and plentiful forests, spaciousness, and breathtaking beauty. The systems of higher learning in Montana, through educational, research, and service programs, assist in the preservation of this natural environment while encouraging desired economic growth and diversification.

The quality of Montana's human environment rests in large measure on the competence of its teachers, health care providers, public administrators, law enforcement personnel, business leaders, and officers of the judiciary. The Montana University System and post-secondary vocational education enhance this rich human resource through a myriad of educational opportunities for training, retraining, and upgrading.

In addition, the Board of Regents recognizes its responsibility to help improve the educational fortunes of Montana's large Indian population. Measures of this commitment include close cooperation with the tribally-controlled community colleges, Indian student fee waivers, establishment of Native American Study Centers on the campuses, extensive data collection and student tracking; and many other efforts to recruit and retain Indian students.

#### **AGENCY ORGANIZATION**

The programs and functions of the Office of the Commissioner of Higher Education are carried out through the following major organizational components:

The Administration Program consists of the Commissioner of Higher Education, academic administration headed by the Deputy Commissioner for Academic Affairs, financial administration headed by the Deputy Commissioner for Management and Fiscal Affairs, legal division with its Chief Legal Counsel, and labor relations and personnel administration represented by the Director of Labor Relations. These administrators, with their professional and clerical staffs, total 13.55 authorized general fund FTE.

The position of Director of Benefits is responsible for the administration of the MUS Group Insurance Program. This position is assisted by .35 FTE professional positions and 1.15 FTE clerical staff in providing university system and vocational technical center employees with group benefits.

The Director of Educational Talent Search with the assistance of a secretary administers the federally funded Talent Search Program within the Office of the Commissioner of Higher Education in Helena. A Crow Coordinator, Flathead Coordinator, Blackfeet Coordinator, Northern Cheyenne Coordinator, and Great Falls Coordinator (totalling 4.15 FTE) are located around the state to provide

career and financial aid counseling to students who are low income, physically handicapped, or culturally disadvantaged.

Carl Perkins Federal Vocational Education Funds are accounted for under the Vo-Tech Administration Program. Additionally, this program has been used to account for the administration of Montana's five vocational technical centers. The Deputy Commissioner for Vocational Technical Education administers the vocational technical centers, while the Director of Federal Vocational Grants is chiefly responsible for the administration of Perkins funds. Additionally, The Human Resource Development Officer is a federally mandated position under the Perkins Act. A financial assistant and secretary make up the remaining positions funded under the Vo-Tech Administration Program.

The Guaranteed Student Loan Program has grown from the 5.95 FTE positions authorized in 1988 to the 1990 authorization of 32.95. This program is lead by the Director of Guaranteed Student Loan Program. This program was established for the purpose of increasing the opportunity to eligible students to receive loans from participating lenders.



# ADMINISTRATION PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	13.55	13.55	13.55	1.00	13.55	.50
Personal Services	570,491.51	598,224	615,329	29,283	614,338	16,227
Operating Expenses	249,200.25	235,891	291,309	93,228	293,778	93,228
Equipment	8,685.90	1,629	1,629	1,100	1,629	0
<b>Total Agency Costs</b>	<b>\$828,377.66</b>	<b>\$835,744</b>	<b>\$908,267</b>	<b>\$123,611</b>	<b>\$909,745</b>	<b>\$109,455</b>
						<b>\$1,019,200</b>
General Fund	828,377.66	835,744	908,267	123,611	909,745	109,455
<b>Total Funding Costs</b>	<b>\$828,377.66</b>	<b>\$835,744</b>	<b>\$908,267</b>	<b>\$123,611</b>	<b>\$909,745</b>	<b>\$109,455</b>
						<b>\$1,019,200</b>

## OVERVIEW

The Administration Program provides the funding for the constitutionally mandated position of Commissioner of Higher Education as the chief administrative officer of the Montana University System and chief administrative officer for post-secondary vocational-technical education in Montana. Additionally funded under the Administration Program is the staff of the Commissioner. These employees assist the Commissioner in securing implementation of Board policy and establishing administrative regulations and policy in the major functional areas of: general administration of the university system and vocational-technical centers; academic administration; financial administration; legal administration; labor relations and personnel administration; student assistance administration.

## GOALS

- \* To provide the University System and Vocational-Technical Centers with academic planning and curriculum review;
- \* To make budgetary recommendations and provide for budgetary review which will ensure that the University System and Vocational-Technical Centers are provided with adequate and stable funding;

- \* To promulgate accounting policy and review system-wide management information and accounting systems to ensure that the University System and Vocational Technical Centers are accountable for their activities, expenditures, and the discharge of their responsibilities;
- \* To provide legal services for the Regents and the campuses;
- \* To set policies and procedures relating to labor negotiations;
- \* To negotiate and settle labor contracts in the best interests of the University System;
- \* To perform facilities planning and make recommendations to the Board of Regents and the Legislature;
- \* To coordinate the community colleges in accordance with state statutes;
- \* To maintain and review Regent policies for the University System and Vocational Technical Centers;
- \* To provide a reporting system and copies of subsequent reports concerning official student FTE statistics at each campus of the University System, Vocational Technical Centers, and Community Colleges;
- \* To administer and facilitate student financial aid programs.

## **AUTHORIZATION**

Article X, Section 9 Montana Constitution  
Section 2-15-1506 Montana Code Annotated

Both of these cites establish the position of the Commissioner of Higher Education.

## **BASE PROGRAM**

The Administration Program supports the general administration of the University System and Vocational Technical Centers as well as supporting the academic, financial, legal, personnel, and student assistance administration for post-secondary education in Montana. These functions are necessary in order for the Board of Regents to satisfy their constitutional and statutory responsibilities.

General Administration of post secondary education is carried out by the Commissioner of Higher Education, the Deputy Commissioner for Vocational Technical Education, and the Secretary to the Board of Regents.

The Academic Affairs Division of the Administration Program performs a myriad of services to post secondary education.

## **BASE FUNDING**

The Administration Program of the Office of the Commissioner of Higher Education is funded entirely with state general funds.

## **INCREASES OVER BASE**

RERS (Regent Employee Reporting System) funding is included in the Administration Program Budget in respective amounts of \$122,167 in FY92 and \$108,015 in FY93. Additional funding to RERS is included in individual campus budgets.

# Performance Indicators

	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Board of Regents meetings	9	9	9	9
Council of Presidents meetings	9	9	9	9
Council of Directors meetings	9	9	9	9
Academic V.P. meetings	12	12	12	12
Fiscal Officers/contr. meet	9	9	9	9
Telecommunications meetings	75	75	75	75
Degree Programs requiring oversight:				
Certificates	72	72	72	72
Associates	43	43	43	43
Bachelors	132	132	132	
Masters	96	96	96	96
Doctorates	23	23	23	23
Number of high schools subject to review-college prep curric.	185	185	185	185
Policies issued	50	50	50	50
Enrollment reports	700	700	700	700
Number of schools reporting	27	27	27	27
IPEDS reports reviewed/coord.	198	198	198	198
Number of schools reporting	33	33	33	33
System Budgets prepared	3	6	3	6
Inventory & Validation of Fees	2	2	2	2
Budget Documents approved	1250	1250	1250	1250
Documents processed	2800	2800	2800	2800
Bond volume	varies	varies	varies	varies
Accounting entities monitored	1000	1000	1000	1000
Employees & Student appeals	100	100	100	100
Legal Caseload at any one time	50	50	50	50
Collective Bargaining Units	22	22	22	22
Grievances	105	105	105	105



# STUDENT ASSISTANCE PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Local Assistance	65,100.00	68,400	68,400	3,100	71,500	6,600
Grants	4,657,604.12	4,973,518	4,973,518	-22,079	4,951,439	-5,528
<b>Total Agency Costs</b>	<b>\$4,722,704.12</b>	<b>\$5,041,918</b>	<b>\$5,041,918</b>	<b>\$-18,979</b>	<b>\$5,022,939</b>	<b>\$1,072</b>
General Fund	4,229,745.55	4,739,190	4,739,190	-18,979	4,720,211	1,072
State Special Revenue Fund	237,704.57	0	0	0	0	0
Federal Special Revenue Fund	255,254.00	302,728	302,728	0	302,728	0
<b>Total Funding Costs</b>	<b>\$4,722,704.12</b>	<b>\$5,041,918</b>	<b>\$5,041,918</b>	<b>\$-18,979</b>	<b>\$5,022,939</b>	<b>\$1,072</b>
						<b>\$5,042,990</b>

## OVERVIEW

Through the Student Assistance Program, various programs are funded which benefit Montana's students. These programs include the WICHE (Western Interstate Commission for Higher Education) Program, WAMI (Washington, Alaska, Montana, and Idaho) Medical Education Program, the Minnesota Rural Dentistry Program. It also includes the federal programs of SSIG (State Student Incentive Program) and the Paul Douglas Teacher Scholarship, as well as the state matching dollars for the federal programs of SEOG (Supplemental Educational Opportunity Grant) and the Perkins Loan Program (formerly NDSL). Finally, the Student Assistance Program includes the state-funded College Work Study Program.

## GOALS

- \* To provide access to quality professional programs not available in Montana public institutions;
- \* To encourage talented Montana students and talented Montana minority students to choose careers in professional fields;
- \* To encourage medical students to choose careers in primary care medicine and to locate their practices in non-metropolitan areas;

- \* To obtain the maximum federal dollar available to assist students in Montana's postsecondary education system;
- \* To distribute the maximum available federal dollars to students in Montana's postsecondary education system;
- \* To obtain and distribute any necessary State matching dollars required in order to qualify for federal student assistance programs;
- \* To report to federal oversight agencies concerning federal monies;
- \* To supplement the federal work study program with state work study in order that more Montana students will qualify for work study jobs.

## AUTHORIZATION

Title 20, Chapters 25, 26 MCA  
State Student Incentive Grant - P.L. 89-329, Title IV, Part A,  
Subpart 3, as added by P.L. 99-498  
Paul Douglas - Higher Education Act of 1965, as amended

## BASE PROGRAM

For FY91, assistance is available for the following budgeted number of students for the WICHE, WAMI, and Minnesota Dentistry Programs:

Program	Cont. Students	New Students
WICHE		
Medicine	16	5
Osteopathic Medicine	2	3
Dentistry	6	2
Veterinary Medicine	32	10
Optometry	16	3
Occupational Therapy	4	1
Podiatry	4	1
Public Health	2	1
WAMI Medicine	60	20
Minnesota Dentistry	6	2
TOTAL	149	47

The state college work study appropriation for the 1991 biennium has been expanded to include students at Montana's vocational technical centers as well as the students in the Montana University System.

The purpose of the Supplemental Educational Opportunity Grant Program (SEOG) is to provide grant assistance to students who are in undergraduate degree or certificate programs and have not previously received a B.A. or B.S. degree. Federal requirements mandate cost sharing for SEOG. The federal share of SEOG awards may not exceed 90% in the 1991 award year. For award year 1992 and subsequent years, the federal share may not exceed 85%.

Under federal regulations for the Perkins Loan Program, the institutions must match the federal capital contribution. The institutional capital contribution must be at least one-ninth of the federal capital contribution. Under the Perkins loan program, postsecondary education institutions provide low-interest (5%) loans to students who are either undergraduate or graduate students.

The State Student Incentive Grant (SSIG) is awarded to Montana residents attending Montana institutions on a full-time basis and showing financial need based on an approved need analysis system. The maximum grant allowed for Montana students is \$600 per year per student. SSIG federal funds are distributed to the six units of the Montana University System, the five vocational-technical centers, the three community colleges, Carroll College, the College of Great Falls, and Rocky Mountain College, as well as some of the

Tribal Colleges. The state-matching portion is distributed only to the University System, Vocational-Technical Center, and Community College campuses.

The federal Paul Douglas Teacher Scholarships are awarded to students of the Montana University System. The students must be enrolled full-time in institutions of higher education which are currently accredited by a nationally recognized accrediting agency, pursuing a course of study leading to certification as a teacher at the preschool, elementary, or secondary level, (but not including graduate study), and maintaining satisfactory progress.

## BASE FUNDING

For fiscal year 1991, the WICHE, WAMI, Minnesota Rural Dentistry, SEOG match, Perkins loan match, and State Work Study are entirely funded with state general fund dollars. The Paul Douglas Teacher Scholarship is entirely funded with federal funds. And, SSIG is funded half with federal dollars and half with state matching dollars.

## DECREASES FROM BASE

Funding for the WAMI program is increased by approximately \$92,000 in FY92 and \$215,000 in FY93. These increases have been primarily offset by a reduction in the WICHE program budget

## Performance Indicators

	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Applications for Certifications Processed	112	112	112	112
Number of students supported professional programs	200	200	200	200
Fin aid distributed to students	100%	100%	100%	100%
Funding distribution (documents)	80	80	80	80
SSIG-students served	1,315	1,315	1,315	1,315
Work study-students served	501	501	501	501
Douglas-students served	24	24	24	24



# EDUCATION FOR ECONOMICS SECURITY GRANT

	Fiscal 1990	Fiscal 1991	Fiscal 1992		Fiscal 1993	
	Actual	Appropriated	Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Operating Expenses	0.00	1,576	1,581	0	1,581	0
Grants	161,561.00	159,985	159,985	-5	159,985	-5
<b>Total Agency Costs</b>	<b>\$161,561.00</b>	<b>\$161,561</b>	<b>\$161,566</b>	<b>\$-5</b>	<b>\$161,566</b>	<b>\$-5</b>
Federal Special Revenue Fund	161,561.00	161,561	161,566	-5	161,566	-5
<b>Total Funding Costs</b>	<b>\$161,561.00</b>	<b>\$161,561</b>	<b>\$161,566</b>	<b>\$-5</b>	<b>\$161,566</b>	<b>\$161,561</b>

## OVERVIEW

The Education for Economic Security Program accounts for the activity of the federal Title II Dwight D. Eisenhower Mathematics and Science Education Act of 1988. The purpose of this grant is to provide awards to institutions of higher education within Montana, on a competitive basis, for the purpose of training and retraining teachers in the mathematics and science disciplines.

## GOALS

- To provide inservice training for elementary, secondary and vocational school teachers to improve their teaching skills in the fields of mathematics and science;
- To retrain teachers who are currently teaching without proper certification in mathematics and science;
- To retrain teachers who are currently teaching in other disciplines to specialize in teaching mathematics and science;
- To establish traineeship programs for new teachers who will specialize in mathematics and science.

## AUTHORIZATION

Title 20, Chapter 15 MCA  
P.L. 100-297 (Title II, Part A of the Dwight D. Eisenhower Mathematics and Science Education Act of 1988)

## BASE PROGRAM

The Office of the Commissioner of Higher Education was authorized to spend \$161,561 in FY91 on Education for Economic Security Grants by Montana's 51st Legislative Session. Federal regulations allow up to 5% of the grant award to be spent on administrative costs. Not less than 95% of the amount made available by the federal government to the state of Montana must be distributed to institutions of higher education on a competitive basis.

## BASE FUNDING

The entire Education for Economic Security Grant Program is funded with federal funds.

## Performance Indicators

	FY90	FY91	FY92	FY93
Actual	10	Appr. 10	Base 10	Base 10
Postsecondary grants awarded	10	10	10	10



# COMMUNITY COLLEGE ASSISTANCE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Local Assistance	3,203,911.00	3,182,291	3,380,255	3,380,255	3,380,255	3,380,255
<b>Total Agency Costs</b>	<b>\$3,203,911.00</b>	<b>\$3,182,291</b>	<b>\$3,380,255</b>	<b>\$3,380,255</b>	<b>\$3,380,255</b>	<b>\$3,380,255</b>
General Fund	3,203,911.00	3,182,291	3,380,255	3,380,255	3,380,255	3,380,255
<b>Total Funding Costs</b>	<b>\$3,203,911.00</b>	<b>\$3,182,291</b>	<b>\$3,380,255</b>	<b>\$3,380,255</b>	<b>\$3,380,255</b>	<b>\$3,380,255</b>

## OVERVIEW

The Community College Assistance Program is the vehicle by which the Office of the Commission of Higher Education distributes the state general fund portion of community college funding. Montana's community colleges are located in Kalispell, Glendive, and Miles City. For the 1990-1991 biennium, the general fund portion of the community college budgets was 47%.

Section 20-15-103 of Montana Code Annotated states that "community college districts shall be under the supervision and coordination of the regents". Additionally, section 20-15-101 provides that community college districts shall be organized under a single board of elected trustees.

## GOALS

- \* To distribute the general fund portion of the Community College operating budgets;
- Additionally, the goals of the Board of Regents in relation to the Community Colleges are:
  - \* To annually approve the operating budgets of the Community Colleges;
  - \* To approve instructional programs of the Community Colleges;
  - \* To approve tuition rates prescribed by the Community Colleges' board of trustees;
  - \* To supervise and coordinate the Community Colleges in compliance with Title 20, Chapter 15, MCA.

## AUTHORIZATION

Title 20, Chapter 15, MCA

## BASE PROGRAM

The base budget for the three community colleges is based upon the following formula:

Student FTE X Cost per student

Student FTE for each community college was determined by averaging the past two years' actual enrollments.

For the base year the cost per student was set at \$3,907. In a 1987 NACUBO (National Association of College and University Business Officers) study of 108 two-year colleges with FTE enrollments of fewer than 1000, the median expenditure level per credit FTE student was \$5,196, excluding scholarships and fellowships. The state share of the Community College budgets was set at 47%.

**BASE FUNDING**

The base year funding for the Community Colleges was 47% state general funds and 53% local sources. The local portion of funding includes tuition and fees, mandatory levy, and other sources of funding. For the three community colleges, tuition and fees represents approximately 15% of their total budgets and local levies account for approximately 33.5%.

**Performance Indicators**

	FY90	FY91	FY92	FY93
	Actual	Appr.	Base	Base
Distributions - (documents)	9	9	9	9
Operating budgets approved	3	3	3	3
Tuition and Fees approved	3	3	3	3

# MUS GROUP INSURANCE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	2.50	2.50	2.50	.00	2.50	.00
Personal Services	67,513.89	74,762	79,418	181	79,599	182
Operating Expenses	470,840.14	320,184	320,413	587,000	907,413	587,000
Equipment	834.18	0	0	0	0	0
Benefits and Claims	9,697,251.95	11,360,000	11,360,000	1,200,000	12,560,000	3,700,000
<b>Total Agency Costs</b>	<b>\$10,236,440.16</b>	<b>\$11,754,946</b>	<b>\$11,759,831</b>	<b>\$1,787,181</b>	<b>\$13,547,012</b>	<b>\$4,287,182</b>
Proprietary Fund	10,236,440.16	11,754,946	11,759,831	1,787,181	11,759,634	4,287,182
<b>Total Funding Costs</b>	<b>\$10,236,440.16</b>	<b>\$11,754,946</b>	<b>\$11,759,831</b>	<b>\$1,787,181</b>	<b>\$13,547,012</b>	<b>\$4,287,182</b>
					<b>\$11,759,634</b>	<b>\$16,046,816</b>

## OVERVIEW

The Board of Regents, pursuant to 2-18-702 MCA, provides faculty and staff with group benefits through the MUS Group Insurance Program within the Office of the Commissioner of Higher Education. The Commissioner has been authorized in Board of Regents policy 804.1 to administer the program as a self insured group insurance plan.

The Montana University System Group Benefits Program covers faculty and staff employed by the six units of the University System the five Vocational Technical Centers, and the Office of the Commissioner of Higher Education. The University System group benefits plan offers medical, dental, vision, group life insurance, and long term disability benefits to employees, retirees, and eligible dependents.

## GOALS

- \* To provide a cost effective employee group benefits program similar in costs and design to colleges and universities in the nation, which will enable the University System to attract and retain qualified faculty and staff to serve the higher education needs of Montana;
- \* To promote the health of employees and dependents through a comprehensive wellness program;

- \* To comply with federal laws and IRS rules and relevant state laws governing employee benefits;
- \* To provide protection from catastrophic health care expenses;
- \* To administer the plan on an actuarially sound basis;
- \* To manage the plan in the best interests of the employees of the University System through the involvement of employees on inter-unit advisory committees.

## AUTHORIZATION

2-18-702 MCA

## BASE PROGRAM

The major functions performed by the University System Group Benefits Program are: 1) To administer the group insurance program of life, medical, dental, vision and LTD benefits; 2) to administer the University System Optional Retirement Program; 3) to represent the University System on a variety of health related committees; 4) to administer the University System Wellness Program; and, 5) to represent the University System at the Legislature on employee benefit issues.

Approximately 12,000 lives are covered by the plan. The group is composed of roughly 4,500 faculty and staff, 950 retirees, 100 COBRA members, and 4,500



dependents. The exact count of each of the above categories may vary by month as changes in employment occur at the campus level. Over \$10,000,000 in medical claims were charged by University System employees in 1989 and \$11,360,000 is estimated for FY91. Approximately 90% of the plan benefits are paid to medical providers residing in Montana.

Medical benefits are provided under a comprehensive major medical approach. The plan has a \$250 deductible (\$500 family deductible) and pays 80% of covered charges to \$3,000 of medical expenses; and 100% thereafter. There is no maximum limit on the amount of benefits payable by the plan. The dental and vision plan pay benefits according to an indemnity schedule. Life insurance benefits are \$20,000. Employees may purchase additional dependent and supplemental life insurance. The LTD program guarantees 60% of final salary in the event of total disability.

The group benefits program receives revenue from three sources: 1) from the state contribution of \$150 a month (FY91) for each active employee; 2) from the out-of-pocket employee contribution for dependent coverage and retiree coverage; and, 3) from interest earnings on funds held in a reserve.

The medical, dental, and vision benefits are funded under a limited self insured approach. The life insurance and long term disability plan are fully insured programs. Under a self insured arrangement the University System assumes liability for claims up to a pre-established "liability limit". United of Omaha is liable for claims that exceed the liability limit.

The Office of the Commissioner administers the limited self insurance program. Administration of this program includes: collection of premiums; management of accounts; employee communication; authorization of exceptions to plan benefits; and, contract revisions and compliance monitoring.

The Group Insurance Program also administers the University System Campus wellness programs. For 1991, the Wellness Program is budgeted to spend \$313,543. In addition to providing funding to the campuses for their individual wellness programs, the Group Insurance Program pays for blood screens, health risk appraisals, and mammograms.

## BASE FUNDING

This program is funded through employee and employer premiums and interest earnings on invested fund balances.

## Performance Indicators

	FY90	FY91	FY92	FY93
	Actual	Appr.	Base	Base
Employees Served	4,250	4,250	4,250	4,250
Retirees Served	970	1,020	1,020	1,020
COBRA Served	105	115	115	115
Number of Claims	33,763	36,000	36,000	36,000
Administration Costs as a ratio to total claims expense	8%	8%	8%	8%
Inflation on plan as a ratio to general medical costs inflation	2.44%	2.44%	2.44%	2.44%

## INCREASE OVER BASE

Increased funding is necessary due to increased costs associated with insurance service contracts and rising claims cost.

# TALENT SEARCH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
	6.15	6.15	6.15	1.30	6.15	7.45
Full Time Equivalent Employees						
Personal Services	144,812.59	149,761	152,795	30,525	152,344	30,532
Operating Expenses	66,844.68	44,058	45,361	19,814	45,348	19,808
Equipment	44.88	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$211,702.15</b>	<b>\$193,819</b>	<b>\$198,156</b>	<b>\$50,339</b>	<b>\$197,692</b>	<b>\$248,032</b>
Federal Special Revenue Fund	211,702.15	193,819	198,156	50,339	197,692	248,032
<b>Total Funding Costs</b>	<b>\$211,702.15</b>	<b>\$193,819</b>	<b>\$198,156</b>	<b>\$50,339</b>	<b>\$197,692</b>	<b>\$248,032</b>

## OVERVIEW

The Talent Search Program is a federally sponsored grant awarded by the Department of Education to the Commissioner of Higher Education. Through the Talent Search Program, students who are low income, physically handicapped, or culturally disadvantaged are provided with counseling in order to increase their number completing high school and enrolling in postsecondary education.

## GOALS

- \* To provide information and counseling with a career and educational emphasis to low-income, potential first-generation college students;
- \* To increase the probability of participants completing secondary school;
- \* To increase the probability of participants being admitted to postsecondary school;
- \* To increase the probability of participants being readmitted to secondary or postsecondary school.

## AUTHORIZATION

Title 20, Chapter 25 MCA

P.L. 99-498 as amended (Title IV Higher Education Act of 1965 Subpart 4)

## BASE PROGRAM

The Educational Talent Search Program is a federally funded grant awarded by the Department of Education to the Office of the Commissioner of Higher Education. Its goal is to provide services that will increase the number of disadvantaged students completing high school and enrolling in postsecondary education in selected target areas. Each year the program serves a minimum of 850 low-income, potential first-generation college students of whom at least 80% are American Indian. Talent Search coordinators are located in five target areas which are the Blackfeet, Flathead, Northern Cheyenne, and Crow Indian Reservations and the city of Great Falls.



The program director and secretary are located in the Commissioner's Office in Helena. The five program coordinators are located in offices in the target areas. The office space for these coordinators is donated by local educational entities supportive of the program and its goals. Coordinators weekly visit their target areas' high schools to provide Educational Talent Search students with the information, assistance, and counseling necessary to help them consider, prepare for, and successfully enroll in higher education.

Talent Search Program's positions of the director and secretary are employed on a 12-month basis. Unfortunately, due to lack of funding, coordinators generally work under 10-month contracts and must go on leave-without-pay status for the remainder of the year. Furthermore, with an average caseload of 200 students, coordinators are not able to provide the same level of services to every student are often frustrated by their inability to meet more of their students' needs. In addition to working with students during school hours, coordinators make home visits to involve parents, recruit role model volunteers to meet with students, make community presentations during financial aid season, take students on career and college visits, and a myriad of other activities during the course of their work.

The director has policy making, administrative, and supervisory responsibility for the program and makes quarterly site visits to each target area to help individual coordinators develop quarterly goals and work schedules. During these site visits the director also meets with target area school, agency, and host office personnel to review program activities and ensure each one's continued involvement in, and support for, the Educational Talent Search Program.

**BASE FUNDING**

The entire Talent Search Program is funded with federal funds.

**INCREASES OVER BASE**

The recommended budget includes \$50,000 additional federal funding authority for FY92 and FY93.

**Performance Indicators**

	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Number Served	850	850	850	850
Retained in High School	90%	90%	90%	95%
Seniors graduating	95%	95%	95%	95%
Students who initiate the postsecondary proc. and enter High sch dropouts who re-enter College stopouts/dropouts who re-enter	60%	60%	60%	60%
	70%	70%	70%	70%
	60%	60%	60%	60%



# VO-TECH APPROPRIATION DISTRIBUTION PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Grants	12,579.00	0	0	0	0	0
Transfers	7,298,976.72	7,492,801	9,143,075	156,864	9,147,642	151,311
<b>Total Agency Costs</b>	<b>\$7,311,555.72</b>	<b>\$7,492,801</b>	<b>\$9,143,075</b>	<b>\$156,864</b>	<b>\$9,147,642</b>	<b>\$151,311</b>
General Fund	6,694,104.81	7,492,801	7,539,601	154,189	7,544,168	129,203
State Special Revenue Fund	604,871.91	0	796,000	2,675	796,000	22,108
Federal Special Revenue Fund	12,579.00	0	807,474	0	807,474	0
<b>Total Funding Costs</b>	<b>\$7,311,555.72</b>	<b>\$7,492,801</b>	<b>\$9,143,075</b>	<b>\$156,864</b>	<b>\$9,147,642</b>	<b>\$151,311</b>
						<b>\$9,298,953</b>

## OVERVIEW

The Office of the Commissioner of Higher Education distributes state general funds, local millage, and federal vocational education funds to the Vocational-Technical centers through the Vo-Tech Appropriation Distribution Program. Montana has five Vocational-Technical centers which are located in Billings, Butte, Great Falls, Helena, and Missoula.

Montana's fiftieth legislative session transferred governance of the Vocational-Technical centers from the local districts to the Board of Regents. The governance was transferred as of July 1, 1987. However, the center directors were the only employees working for the Board of Regents for the 1987-1988 biennium. All other employees became employees of the Board of Regents July 1, 1989.

## GOALS

\* To distribute the state general fund, millage, and federal funds which were appropriated to the Vocational-Technical Centers; Additionally, the goals of the Board of Regents in relation to the Vocational-Technical Centers as stated in section 20-16-101 MCA are:

- \* To establish and when necessary amend a plan for the orderly development of Vocational-Technical center education that is consistent with federal and state law, controlled to prevent unnecessary duplication, and funded to ensure necessary growth and quality education;
- \* To adopt standards for courses and programs;
- \* To review programs to determine the present and future needs of employers and provides qualified graduates for positions for which there is or may in the near future be a demand;
- \* To establish student entrance and graduation requirements;
- \* To establish student tuition and prescribe the bases and limitations for charging of fees, taking into account funding available from all other sources;
- \* To adopt budget requests for the vocational-technical centers;
- \* To establish a procedure by which students can receive part of their education and training through programs, courses, and on-the-job training offered by the private sector and not available at the centers;
- \* To establish a procedure by which qualified persons in the private sector can participate in the training and teaching of students in the centers' classrooms when such persons have training, knowledge, and skills not available through the centers' faculty;

- \* To provide means by which the centers' faculty can obtain advanced education and training in new areas and either be reimbursed for their expenses or raised to a higher salary level, or both;
- \* To establish for the various centers uniform policies for recordkeeping; financial transactions; accounting; maintenance; recruiting, guidance, and placement of students; examinations; personnel relations; and other matters as determined by the board;
- \* To negotiate with the bargaining representative for personnel of each center or the personnel of the center system in a manner consistent with state and federal law;
- \* To work with other institutions of higher education to implement the transfer of course credits between those institutions and the vocational-technical centers;
- \* To adopt rules and procedures to implement these goals and to carry out any other powers and duties of the board.

### AUTHORIZATION

Title 20, Chapter 16, MCA

### BASE PROGRAM

Base funding for the five Vocational-Technical Centers was developed using the incremental funding approach. Prior to fiscal year 1990, each local district in which a Vocational-Technical Center exists provided an additional mill levy to support its Vocational-Technical Center. The percentage that this additional mill levy was of each Vocational-Technical Center's budget ranged from a low of approximately 4% at the Billings Center to a high of approximately 26% at the Missoula Center. Funding for the 1990-1991 biennium did not attempt to standardize budgets or establish a formula for Vocational-Technical Center budgeting, but rather allowed them to maintain their current funding levels.

### BASE FUNDING

Funding for the Vocational-Technical Centers included state general funds, county millage, tuition and fees, and federal funds. The percentages appropriated for 1991 were:

General Fund	68%
County Millage	7%
Tuition and Fees	18%
Federal Funds	7%

### Performance Indicators

	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Funding Distrib (Documents)	144	144	144	144
Operating Budgets Approved	5	5	5	5
Tuition and Fees Approved	5	5	5	5
Perkins Annual Application	28	28	28	28
Budget Adjmnts (Documents)	250	250	250	250



# VO-TECH ADMINISTRATION

	Fiscal 1990	Fiscal 1991	Fiscal 1992		Fiscal 1993	
	Actual	Appropriated	Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	5.00	5.00	5.00	.00	5.00	.00
Personal Services	179,273.42	198,668	190,409	439	189,811	439
Operating Expenses	37,402.51	33,894	34,228	6,054	34,388	6,088
Equipment	444.95	0	0	0	0	0
Grants	955,138.85	2,299,462	2,299,462	0	2,299,462	0
Transfers	2,597,502.34	2,288,088	2,288,088	0	2,288,088	0
<b>Total Agency Costs</b>	<b>\$3,769,762.07</b>	<b>\$4,820,112</b>	<b>\$4,812,187</b>	<b>\$6,493</b>	<b>\$4,811,749</b>	<b>\$6,527</b>
General Fund	79,857.55	80,637	82,319	3,466	82,100	3,483
Federal Special Revenue Fund	3,689,904.52	4,739,475	4,729,868	3,027	4,729,649	3,044
<b>Total Funding Costs</b>	<b>\$3,769,762.07</b>	<b>\$4,820,112</b>	<b>\$4,812,187</b>	<b>\$6,493</b>	<b>\$4,811,749</b>	<b>\$6,527</b>
						<b>\$4,818,276</b>

## OVERVIEW

The Vo-Tech Administration Program administers the sole state agency responsibilities of the Montana Board of Regents of Higher Education for Montana's use of the federal funds which support vocational education at the secondary school level and at the postsecondary level. Administration of these Carl D. Perkins Vocational Education Act funds includes provision of technical assistance to the field, grants management, performance reviews, filing of an annual performance report, and the development and submission of a State Plan for the use of the funds. The Board of Regents is required by state statute to contract with the Office of Public Instruction for provision of technical assistance and grants management for secondary level grant subrecipients. Sole state agency responsibilities also include provision of technical assistance to, and civil rights compliance monitoring of, all providers of vocational education that receive any funds from the U.S. Department of Education. This responsibility encompasses Title IX of the Educational Amendments of 1972, Title VI of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973. Compliance monitoring activities are reported annually to the Office of Civil Rights of the U.S. Department of Education.

## PROGRAM GOAL

\* To administer the federal funds for vocational education by providing technical assistance, grants management, performance reviews, civil rights compliance monitoring, and annual performance and compliance monitoring reporting for the use of federal funds in support of vocational education in Montana.

## AUTHORIZATION

Title 20, Chapter 16 MCA  
P.L. 98-524 Carl D. Perkins Vocational Education Act of 1984

## BASE PROGRAM

In fiscal year 1991, the sole state agency will develop a new State Plan for Vocational Education in Montana that will meet federal requirements for documenting the state's planned use of the funds provided through new federal legislation resulting from the reauthorization process in Congress. It is expected



that the first State Plan for the new legislation will be a three-year plan--for program years 1992 through 1994--and will be due to the federal government by May 1, 1991. The plan will be developed in consultation with the Montana Council on Vocational Education, the Job Train Coordinating Council, the Office of Public Instruction, representatives of secondary and postsecondary eligible subrecipients, and the general public (through a minimum of two public hearings).

In fiscal year 1991, there will be three major objectives of technical assistance activities:

- To develop a new Technical Assistance Manual (TAM) for use by eligible subrecipients at both the secondary and postsecondary levels. The new TAM will explain the new federal vocational education legislation that will have been enacted as the result of reauthorization of the Perkins Act, describe the granting process, and summarize grant management responsibilities of both the grantees and the grantor agencies.
- To provide four training sessions across the state to introduce the new TAM to the field of eligible secondary and postsecondary subrecipients.
- To provide gender equity training, information, and coordination activities through: provision of at least eighteen workshops; professional support of six regional equity networks within the state and their umbrella organization, the State Equity Council; provision of a bimonthly equity newsletter; coordination with Office of Public Instruction equity staff; and consultation with community-based organizations and education agencies.

Grant management objectives for program year 1991 include: monitoring and evaluation of subrecipient management and closeout of 90 postsecondary program year 1990 projects; establishment of secondary and postsecondary grant distribution procedures according to the requirements of the new federal legislation; distribution of available federal funds to eligible postsecondary subrecipients; and coordination with the Office of Public Instruction to maintain consistency of state administration activities at the secondary and postsecondary levels and to obtain relevant secondary level data for state reporting requirements.

Grantee performance reviews in program year 1991 will be conducted on at least 20% of the program year 1990 grantee agencies at the postsecondary level--a minimum of five grantee agencies. Additional performance reviews will be conducted on two postsecondary agencies previously reviewed and identified as needing followup monitoring.

Civil rights compliance monitoring activities in program year 1991 will be conducted in the form of a desk-audit on 20% of the postsecondary agencies providing vocational education and receiving any funds from the U.S. Department of Education--a minimum of six agencies. Five percent of the agencies will receive an on-site review--a minimum of one agency.

Reporting activities in program year 1991 will consist of submission of: (1) the Annual Performance Report for 1990 on Montana's use of federal vocational funds to the Office of Vocational and Adult Education of the U.S. Department of Education by December 31, 1990; (2) the Annual Civil Rights Compliance Report for 1991 to the Office of Civil Rights of the U.S. Department of Education by June 30, 1991; and (3) the submission of the annual Gender Equity Status Report for program year 1990 to the Montana Board of Regents of Higher Education by October 31, 1990.

## BASE FUNDING

Carl D. Perkins Vocational Education Act funds are federal funds, with the following cost-sharing requirements:

- (1) State Administration costs must be matched with state funds;
- (2) Currently, 7% of the basic grant award is allowed for state administration;
- (3) The remaining flow-through federal dollars available for grants must be matched dollar for dollar at the local level with the exception of the Single Parent, Sex-Bias, and Corrections categories of the Basic Grant and Title III.

## Performance Indicators

	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Technical Assistance:				
TAM training sessions	4	4	4	4
Equity workshops	10	18	18	18
Issue copies of TAM	0	500	0	0
Grants Management:				
Projects	90	90	90	90
Grants distribution process	1	1	1	1
Performance Reviews	7	7	7	7
Compliance Monitoring	6	6	6	6
Annual Reporting:				
Vocational funds	1	1	1	1
Civil Rights	1	1	1	1
Gender Equity	1	1	1	1

# APPROPRIATIONS DISTRIBUTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Transfers	86,911,219.16	95,199,123	109,223,675	3,839,022	108,939,428	3,789,300
<b>Total Agency Costs</b>	<b>\$86,911,219.16</b>	<b>\$95,199,123</b>	<b>\$109,223,675</b>	<b>\$3,839,022</b>	<b>\$108,939,428</b>	<b>\$3,789,300</b>
General Fund	86,774,332.00	95,199,123	98,053,233	3,322,756	97,852,885	2,961,447
State Special Revenue Fund	136,887.16	0	11,170,442	516,266	11,086,543	827,853
<b>Total Funding Costs</b>	<b>\$86,911,219.16</b>	<b>\$95,199,123</b>	<b>\$109,223,675</b>	<b>\$3,839,022</b>	<b>\$108,939,428</b>	<b>\$3,789,300</b>

## OVERVIEW

Funding for the units of the Montana University System is distributed through the Commissioner's Appropriation Distribution Program. State general funds are transferred to Montana State University, the University of Montana, Eastern Montana College, Northern Montana College, Western Montana College of the University of Montana, Montana College of Mineral Science and Technology, the Agricultural Experiment Station and Extension Service of Montana State University, the Bureau of Mines at Montana Tech, and the Forestry Conservation and Experiment Station at the University of Montana. Additionally, through this program the statewide 6-mill levy funds are distributed to the six college or university campuses.

## GOALS

- \* To transfer general funds, 6-mill levy funds, and educational trust fund interest as appropriated to the University System; Additionally, the goals of the Board of Regents in relation to the University System as stated in section 20-25-301 MCA are:
- \* To exert general control and supervision of the units of the Montana university system, which shall be considered for all purposes one university;
- \* To adopt rules, not inconsistent with the constitution and the laws of the state, for its own government which are proper and necessary for the execution of the powers and duties conferred upon it by law;

- \* To provide, subject to the laws of the state, rules for the government of the system;
- \* To grant diplomas and degrees to the graduates of the system upon the recommendation of the faculties and have discretion to confer honorary degrees upon persons other than graduates upon the recommendation of the faculty of such institutions;
- \* To have, when not otherwise provided by law, control of all books, records, buildings, grounds, and other property of the system;
- \* To receive from the board of land commissioners, other boards, persons, or from the government of the United States all funds, incomes, and other property the system may be entitled to and use and appropriate the property for the specific purpose of the grant or donation;
- \* To have general control of all receipts and disbursements of the system;
- \* To appoint a president and faculty for each of the institutions of the system, appoint any other necessary officers, agents, and employees, and fix their compensation;
- \* To confer upon the executive board of each of the units of the system such authority as may be deemed expedient relating to immediate control and management, other than authority relating to financial matters or the selection of the teachers, employees, and faculty;
- \* To confer, at the regents' discretion, upon the president and faculty of each of the units of the system for the best interest of the unit such authority relating to the immediate control and management, other than financial, and the selection of teachers and employees;



- \* To prevent unnecessary duplication of courses at the units of the system;
- \* To appoint a certifies professional geologist or registered mining engineer as the director of the Montana state bureau of mines and geology, who shall be designated the state geologist, and appoint any other necessary assistants and employees and fix their compensation. The regents shall prepare a report to each regular session of the legislature showing the progress and condition of the bureau, including any other necessary or required information;
- \* To supervise and control the agricultural experiment station, along with any executive or subordinate board or authority which may be appointed by the governor with the advice and consent of the regents;
- \* To affix the seal bearing the words "Montana university system", to all diplomas and all other papers, instruments, or documents which require it;
- \* To assure an adequate level of security for data and information technology resources within the university system;
- \* To prescribe tuition rates, matriculation charges, and incidental fees for students in the regents' jurisdiction;
- \* To waive, at their discretion, student tuitions;
- \* To adopt rules and procedures to implement these goals and carry out any other powers and duties of the board as defined in the Montana Constitution or in statute.

## AUTHORIZATION

Article X, Section 9,10 Montana Constitution  
Title 20, Section 25 MCA

## BASE PROGRAM

The base program budgets for the Montana University System were developed using both a formula and an incremental approach. The instructional program and support program budgets were prepared using the formula approach. The programs of research, public service, and physical plant of the University System as well as the budgets for Agricultural Experiment Station, Extension Service, Bureau of Mines, and Forestry Conservation and Experiment Station were developed using an incremental budgeting approach.

## BASE FUNDING

The six campuses of the University System are funded with a combination of sources. These include state general fund, tuition and fees, millage, indirect costs, educational trust fund interest, and other sources of revenue. For FY91, indirect costs were not used as a source of current unrestricted fund revenue.

The percentage breakdown of funding for the six campuses for 1991 is:

General Fund	66%
Tuition and Fees	24%
Millage	9%
Ed Trust Interest	.5%
Other	.5%

The Agricultural Experiment Station, Extension Service, Bureau of Mines, and Forestry Conservation and Experiment Station receive their funding from state general funds, federal funds, and state special revenue funds.

## Performance Indicators

	FY90	FY91	FY92	FY93
	Actual	Appr.	Base	Base
Funding Distrib (Documents)	24	24	24	24
Operating Budgets Approved	10	10	10	10
Tuition and Fees Approved	6	6	6	6
Budget Adjmnts (Documents)	1000	1000	1000	1000

# GUARANTEED STUDENT LOAN PROGRAM

	Fiscal 1990	Fiscal 1991	Fiscal 1992		Fiscal 1993	
	Actual	Appropriated	Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	32.95	32.95	32.95	3.00	32.95	3.00
Personal Services	503,922.48	761,516	791,881	66,758	790,386	66,610
Operating Expenses	734,857.58	651,248	655,644	55,896	656,648	55,866
Equipment	74,557.00	25,087	25,087	110,000	25,087	110,000
<b>Total Agency Costs</b>	<b>\$1,313,337.06</b>	<b>\$1,437,851</b>	<b>\$1,472,612</b>	<b>\$232,654</b>	<b>\$1,472,121</b>	<b>\$232,476</b>
				<b>\$1,705,266</b>		<b>\$1,704,597</b>
Federal Special Revenue Fund	1,313,337.06	1,437,851	1,472,612	232,654	1,472,121	232,476
<b>Total Funding Costs</b>	<b>\$1,313,337.06</b>	<b>\$1,437,851</b>	<b>\$1,472,612</b>	<b>\$232,654</b>	<b>\$1,472,121</b>	<b>\$232,476</b>
				<b>\$1,705,266</b>		<b>\$1,704,597</b>

## OVERVIEW

The Guaranteed Student Loan Program began in Montana in 1980. It was formed by the Montana legislature and placed under the direction and supervision of the Montana University System Board of Regents. The program is funded by the federal government payments of an administrative cost allowance, by the guarantee fee charged to borrowers, and by interest earned on investments.

When the program was created, the intent was to assist students who were not eligible for federal grants and were unable to afford the costs of postsecondary education. The program was intended to assist the middle income family. The philosophy of the program was gradually changed by federal legislation and is now geared toward the low income student.

The Montana Guaranteed Student Loan Program initially contracted with United Student Aid Funds in Indianapolis to process the applications, track the students, warehouse the records, and perform all other necessary functions. In the fall of 1987, the Board of Regents approved a plan to phase-in the servicing, bringing it a step at a time to Montana.

The first phase began in April 1988 when the Montana guarantee agency began processing the students' application and promissory note in Helena. The second phase began in April 1989 when the agency began processing status changes and

lender fee billings. All phases were performed in Helena by March of 1990. At that time the staff will have grown from two employees in 1980 to approximately thirty employees in 1990.

## GOALS

- \* To provide quality service to lenders, educational institutions and borrowers in a manner which is in compliance with federal and state regulations in order to ensure participants receive timely and accurate information;
- \* To provide participants assistance and reduce the confusion and complexity inherent in the program;
- \* To reduce the agency's cumulative default rate by 1% per fiscal year to ensure the integrity of the program is maintained and that school and lender participation is maintained;
- \* To increased cumulative recoveries from defaulted accounts by 5% per fiscal year to reduce the net national budget allocated to the program and help restore program integrity;
- \* To implement a training program for staff development which will enable staff to maintain quality performance in meeting constant changes in program regulations and technology.



## **AUTHORIZATION**

Title 20, Chapter 26 MCA

Title IV Higher Education Act of 1965, as amended

## **BASE PROGRAM**

The Montana Guaranteed Student Loan Program oversees the administration of the Stafford Loan, Supplemental Loans for Students, and Parental Loan for Undergraduate Students programs, as well as the Paul Douglas Teacher Scholarship, the University System Honor Scholarship, the State Student Incentive Grant, and the State Work Study Program. General administration of the Paul Douglas Teacher Scholarship, the Honor Scholarship Program, the State Student Incentive Grant, and the State Work Study Program is carried out by the Director of the Montana Guaranteed Student Loan Program (MGSLP). The amount of time available for administering these functions is severely limited due to federal changes in the student loan program which require immediate attention. No general fund dollars are provided for these functions. Funding is provided by the revenue generated from the Stafford, Supplemental Loans for Student (SLS), and Parent Loans for Undergraduate Student (PLUS) programs.

The administration of the student loan programs is overseen by the Program Director. The funding for the programs comes from the federal administrative cost allowance, guarantee fees paid by the borrowers, and investment earnings from cash reserves. The agency is in the process of establishing an in-house collections unit to perform recovery of defaulted loans. Revenue from this unit will provide additional funds for operations. No support is received from the general fund. However, the agency's check disbursement service provides revenue to the general fund. Participating lenders wire-transfer funds to the agency to be disbursed to borrowers. The funds are held in the general fund once the warrant has been written until the warrant has been cashed. The funds usually remain in the general fund for a minimum of 30 days and may remain there for as much as 120 days. The general fund received interest on over \$9 million dollars during FY89 and over \$11 million in FY90.

There are 5 units that provide support for MGSLP: Application Processing, Status Management, Disbursement Service; Customer Assistance, Pre-Claims;

Compliance Reviews; Claim Review, Post-Claims and Collections; and Fee Billing. Legal services are provided by the Chief Legal Counsel. As collection efforts increase the strain on the legal counsel will increase. Litigation against defaulted borrowers is paper intensive as is contesting bankruptcy filings.

**Application Processing, Status Management, Disbursement Service:** This unit is responsible for processing applications for new loans, maintaining the data base on all existing loans, and acting as an escrow agent for participating lenders. Currently there are over 70,000 borrowers who have active loans. The status management personnel are responsible for maintaining correct information on these borrowers and for informing lenders and educational institutions of status changes MGSLP receives from outside sources. The disbursement service keeps participating lenders informed of all funds disbursed on their behalf to borrowers, loans cancelled, lost warrants, reissued warrants, and completes required fee billing reports for these lenders. Due to staff constraints, MGSLP has only been able to offer this service to small lending institutions.

**Customer Assistance/Pre-Claims:** This unit is responsible for handling all in-coming calls from borrowers, lenders, and educational institutions regarding the status of loans, for providing technical information, and for counseling borrowers who are having problems in receiving or repaying loans. Two 800 toll-free numbers have been installed as well as have 2 telephone answering machines. The drastic increase in the number of in-coming phone calls has required MGSLP to look at alternatives in handling the phone volume. Two alternatives which are being considered are to either increase the number of staff available to handle the in-coming calls or to install an automated call distribution system which would queue the calls to the next available assistant. In addition, this unit receives requests from lenders asking for assistance in contacting borrowers who are delinquent on the repayment of loans. This involves letters to the borrowers and at least one phone call per borrower. Usually follow-up phone calls are required in order to insure that the borrower has received the needed forms and/or information and that the borrower has brought the account current. MGSLP thinks the main way to reduce the student loan default rate and to restore the program's integrity is to prevent defaults.



**Compliance Review:** To improve the quality of the service provided to lenders and educational institutions, it is imperative to have well-trained specialists who can provide training and workshops to participating institutions and new personnel. Federal regulator changes have occurred frequently during the past 3 years with very little time for implementation. It has become increasingly difficult to keep the policy and procedure manual up-to-date and to maintain qualified, trained student loan officers. The state of Montana is vast in size, which requires the specialists to spend a great deal of time on the road assisting lenders and educational institutions. The mission of MGSLP is to provide open access to all eligible students, which requires the participation of numerous small-lending institutions throughout the state; from Plentywood and Sidney to Libby and Dillon. It is also necessary to send the specialists to outside training seminars provided by the Department of Education and national organizations to keep them abreast with constant changes in federal regulations. Also, as the program has become more complex and more and more lenders install automated systems for compiling and preparing required reports, it has been necessary to purchase software that will assist the specialists in performing compliance reviews. This also requires lap top computers and portable PC's which can be taken to the field to verify the lender's documents.

**Claim Review/Post-Claims/Collections:** The program's integrity is directly reflected by the quality of this unit. The default rate incurred by educational and lending institutions determine the ability of the institution to participate in the student loan program. Likewise, once a borrower defaults, the borrower is no longer eligible for Title IV funds and the borrower's credit rating is ruined. Tools such as income tax offset, garnishment of wages, and litigation against borrower assets are used to collect on defaulted loans. It is therefore imperative that a loan not be placed in default in error and that every step is taken to collect on that default once it occurs. In the past, MGSLP used outside collection agencies as the sole source of collecting on defaulted loans. New federal regulations make it imperative that the guarantee agency attempt to collect the loans in-house before turning the loans over to a collection agency. The Department of Education allows the guarantee agency to retain 30% of recoveries from defaulted loans to cover the agency's costs. These funds will be needed to enhance MGLSP's collection ability. Since this is a new unit, it is difficult to determine the number of in-coming and out-going phone calls which will be required to monitor the accounts, but it is anticipated that this will be an additional strain on the current telephone system.

**Fee Billing:** When a student takes out a student loan, the student does not have to have collateral for the loan. The guarantee agency acts as the collateral. To assure the future collection of the loan, the guarantee agency charges the borrower a 3% guarantee fee which is similar to an insurance premium. The lender collects the fee from the borrower at the time the funds are disbursed. Each month the guarantee agency bills the lender for the fees collected by the lender. The fee billing unit is responsible for verifying the billing invoices, ensuring the fees are received from the lenders, and posting the fees to the borrowers' accounts. There are over 100 active lenders and 40,000 disbursements each year which must be verified and on which fees must be collected.

**General Administration:** Conducting the general administration of the program requires sufficient employee working space; sufficient storage space for supplies, forms, and documents; and a well-trained staff. Frequent travel is necessary in order for the staff of the Montana Guaranteed Student Loan Program to attend training seminars to keep current with constantly changing federal regulations and to represent the Montana guarantee agency at national conferences. Additionally, the Program Director must travel to meet with congressmen and other government officials to discuss program regulations.

## BASE FUNDING

The Montana Guaranteed Student Loan Program is funded with three major sources of revenue: an administration cost allowance, guarantee fees, and interest earnings. For FY91, the breakdown of funding, as appropriated, is

Guarantee Fees	\$ 930,564	54%
Administrative Cost	418,880	24.5%
Investment Earnings	289,713	17%
Collection Costs Retain	50,000	3%
Recoveries on defaults	25,000	1.5%

## INCREASES OVER BASE

The recommended budget included \$231,038 additional funding authority for both FY92 and FY93. A FY91 budget amendment for this amount was certified due to additional personnel, operations and equipment expenses incurred when the GSL program transferred the loan processing function from a contracted service to an in-house operation.

# Performance Indicators

	FY90	FY91	FY92	FY93
SSIG-Students served	Actual 1,315	Enacted 1,315	Base 1,315	Base 1,315
Work study-Students served	501	501	501	501
Douglas-Students served	24	24	24	24
High School Honor- students served	484	484	484	484
Application Processing				
Applications processed	19,052	19,052	19,052	19,052
Notice of Guarantees	19,052	19,052	19,052	19,052
Reports to schools/lenders	1,800	1,800	1,800	1,800
Data entry hours	1,440	1,440	1,440	1,440
Check Disbursement Service:				
Number of checks disb.	15,152	16,667	18,334	20,167
Lenders serviced	40	45	45	45
Reports prepared	480	480	480	480
Customer Service				
In-coming calls handled	8,730	10,000	10,000	10,000
Pre-Claims				
In-coming calls handled	4,828	7,200	8,000	8,000
Lender Requests Handled	12,000	15,000	18,000	18,000
Out-going phone calls	36,000	45,000	54,000	54,000
Letters/forms sent out	15,000	19,000	22,500	22,500
Claim Review-claims process	2,184	4,680	5,500	6,200
Man hours for claim proc.	8,000	10,000	10,000	12,000

Post-Claims					
In-comings calls handled	N/A	5,000	6,000	6,500	
Out-going calls	N/A	12,000	15,000	18,000	
Letters/forms sent out	2,500	6,000	7,000	7,500	
Checks received	N/A	12,000	18,000	18,000	
Litigations processed	N/A	120	200	300	
Bankruptcy protests	N/A	60	75	80	
Fee Billing					
Reports mailed	1,200	1,200	1,200	1,200	
Checks received	1,200	1,200	1,200	1,200	
Man hrs-report reconcil	2,000	2,000	2,000	2,000	
Compliance Review/Training					
Lenders in program	125	125	125	125	
Education Institutions-Mt	45	45	45	45	
Workshops conducted	10	10	10	10	
Training Sessions	12	12	12	12	



# BOARD OF REGENTS - ADMINISTRATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992 Base	Fiscal 1992 Incr/Decr Recommended	Fiscal 1993 Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Personal Services	12,200.00	13,400	13,400	12,200	13,400	-1,200
Operating Expenses	21,194.81	19,468	19,942	21,142	19,951	1,200
Total Agency Costs	\$33,394.81	\$32,868	\$33,342	\$0	\$33,351	\$0
General Fund	33,394.81	32,868	33,342	0	33,351	0
Total Funding Costs	\$33,394.81	\$32,868	\$33,342	\$0	\$33,351	\$0

## OVERVIEW

The Board of Regents - Administration Program provides funding for the expenses of the seven members of the Montana Board of Regents. This funding enables the Board of Regents to perform their Montana Constitution mandate to "supervise, coordinate, manage and control the Montana university system". Additionally, the Board of Regents have been statutorily assigned administrative and supervisory control over vocational-technical education in Montana and supervision and coordination responsibility for Montana's three community colleges.

## GOALS

- \* To control and supervise the units of the Montana University System;
- \* To administer and supervise Montana's five vocational-technical centers;
- \* To supervise and coordinate Montana's three community colleges;
- \* To adopt rules, not inconsistent with the constitution and the laws of the state, for the government of post secondary education which are proper and necessary for the execution of the powers and duties conferred upon the Board of Regents by law;
- \* To provide, subject to the laws of the state, rules for the government of post secondary education;
- \* To grant diplomas and degrees to the graduates of the University System;
- \* To adopt standards for courses and programs in post secondary education;
- \* To establish student entrance and graduation requirements;

- \* To establish student tuition and prescribe the bases and limitations for charging of fees, taking into account funding available from all other sources;
- \* To adopt budget requests for post secondary education;
- \* To approve annual operating budgets for post secondary education and subsequent changes to these budgets;
- \* To establish uniform policies for recordkeeping, financial transactions, accounting, maintenance, recruiting, guidance, and placement of students, examinations, and personnel relations'
- \* To appoint presidents, directors, faculty, and any other necessary officers, agents, and employees, and fix their compensation;
- \* To prevent unnecessary duplication of courses and programs;
- \* To work with all post secondary institutions in Montana to implement the transfer of course credits.

## AUTHORIZATION

Article X, Sections 9,10 Montana Constitution  
Sections 20-25-301, 20-16-101, 2-15-1505 Montana Code Annotated

## BASE PROGRAM

The personal services portion of the Board of Regents base budget allows reimbursement for the Regents of the statutory rate of \$50.00 per day for a total of 268 meeting days. The 268 days averages 3 meeting days per Regent per month. While the Regents ordinarily hold 9-10 formal board meetings per year,

they are required to attend many other meetings as well. Regent committee assignments, presidential and commissioner searches, Legislative and Executive branch meetings, and public hearing are examples of other meeting the Regents are expected to attend.

**BASE FUNDING**

The Board of Regents - Administration Program is funded entirely with state general funds.

**Performance Indicators**

	FY90	FY91	FY92	FY93
	Actual	Appr.	Base	Base
Board of Regents meetings	9	9	9	9
Other meetings - per Regent	11	11	11	11

# BOARD OF REGENTS - BOND PAYMENTS

	Fiscal 1990	Fiscal 1991	Fiscal 1992		Fiscal 1993	
	Actual	Appropriated	Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Debt Service	730,905.00	717,068	717,068	-10,813	717,068	-18,915
Total Agency Costs	\$730,905.00	\$717,068	\$717,068	\$-10,813	\$717,068	\$-18,915
General Fund	730,905.00	717,068	717,068	-10,813	717,068	-18,915
Total Funding Costs	\$730,905.00	\$717,068	\$717,068	\$-10,813	\$717,068	\$-18,915
						698,153
						\$698,153

## OVERVIEW

The Board of Regents - Bond Payment Program is funded in order for the Board of Regents to pay the three local school districts for which bonded indebtedness exists for vocational-technical center buildings. These three centers are the Billings, Butte, and Great Falls Vocational-Technical Centers.

The Board of Regents acquired the Helena and Missoula Vocational Technical Centers for \$10 each. Language in the 51st Legislative Session's appropriation bill required the Board of Regents to obtain contracts for deed for the Vocational-Technical Center facilities in Billings, Butte, and Great Falls prior to making any additional payments to the local school districts. During FY90 the Board of Regents entered into such agreements with all three districts.

## GOAL

\* To make semi-annual payments to the school districts in Billings, Butte, and Great Falls which equal the amounts of interest and principal due on bonded indebtedness for the Vocational Technical Center building located in those districts.

## AUTHORIZATION

20-16-108 MCA

## BASE PROGRAM

During the base year, the Board of Regents - Bond Payments Program was appropriated sufficient state general fund to make the following payments:

	FY90	FY91
Center		
Billings	\$ 138,795.00	\$ 133,332.50
Butte	471,660.00	468,285.00
Great Falls	120,450.00	115,450.00

For the 1993 biennium, the following payments would be required:

	FY92	FY93
Center		
Billings	\$127,870.00	\$122,407.50
Butte	468,035.00	470,495.00
Great Falls	110,350.00	105,250.00

## BASE FUNDING

The Board of Regents - Bond Payments Program is funded entirely with state general funds.



Performance Indicators

	FY90 Actual	FY91 Appr.	FY92 Base	FY93 Base
Payments-Billings	138,795.00	133,332.50	127,870.00	122,407.50
Payments-Butte	471,660.00	468,285.00	468,035.00	470,495.00
Payments-Grt Flls	120,450.00	115,450.00	110,350.00	105,250.00









**UNIVERSITY OF MONTANA**

**Montana University System**





# UNIVERSITY OF MONTANA

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	755.74	759.46	815.62	.72	816.34	.72	816.34
Personal Services	29,263,716.95	27,299,589	32,504,160	23,424	32,527,584	23,424	32,527,584
Operating Expenses	8,022,160.66	12,784,809	9,189,311	12,794	9,202,105	18,299	9,075,093
Equipment	987,066.67	294,549	1,246,569	-175,089	1,071,480	-175,089	1,112,524
Transfers	71,591.59	0	0	0	0	0	0
Debt Service	5,368.44	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$38,349,904.31</b>	<b>\$40,378,947</b>	<b>\$42,940,040</b>	<b>\$-138,871</b>	<b>\$42,801,169</b>	<b>\$-133,366</b>	<b>\$42,715,201</b>
Current Unrestricted Fund	38,349,904.31	40,378,947	42,940,040	-138,871	42,801,169	-133,366	42,715,201
<b>Total Funding Costs</b>	<b>\$38,349,904.31</b>	<b>\$40,378,947</b>	<b>\$42,940,040</b>	<b>\$-138,871</b>	<b>\$42,801,169</b>	<b>\$-133,366</b>	<b>\$42,715,201</b>
Instruction	19,431,027.59	21,742,085	23,151,534	0	23,151,534	0	23,151,534
Organized Research	662,546.80	560,086	703,360	3,937	707,297	4,391	715,205
Public Service	210,594.01	192,690	193,009	0	193,009	0	193,050
Operation & Maint Of Plant	5,418,381.09	5,599,300	5,687,016	-168,574	5,518,442	-163,523	5,499,063
Scholarships & Fellowships	1,164,087.05	1,077,497	1,077,497	0	1,077,497	0	1,077,497
Support	11,463,267.77	11,207,289	12,127,624	25,766	12,153,390	25,766	12,078,852
<b>Total Program Costs</b>	<b>\$38,349,904.31</b>	<b>\$40,378,947</b>	<b>\$42,940,040</b>	<b>\$-138,871</b>	<b>\$42,801,169</b>	<b>\$-133,366</b>	<b>\$42,715,201</b>

## INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	418.42	422.14	450.60	.00	450.60	.00	450.60
Personal Services	17,745,894.92	17,960,033	21,274,783	0	21,274,783	0	21,274,783
Operating Expenses	1,606,707.98	3,707,052	1,756,959	0	1,756,959	0	1,756,959
Equipment	73,056.25	75,000	119,792	0	119,792	0	119,792
Debt Service	5,368.44	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$19,431,027.59</b>	<b>\$21,742,085</b>	<b>\$23,151,534</b>	<b>\$0</b>	<b>\$23,151,534</b>	<b>\$0</b>	<b>\$23,151,534</b>
Current Unrestricted Fund	19,431,027.59	21,742,085	23,151,534	0	23,151,534	0	23,151,534
<b>Total Funding Costs</b>	<b>\$19,431,027.59</b>	<b>\$21,742,085</b>	<b>\$23,151,534</b>	<b>\$0</b>	<b>\$23,151,534</b>	<b>\$0</b>	<b>\$23,151,534</b>

# ORGANIZED RESEARCH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	10.16	10.16	10.16	.00	10.16	10.16	.00	10.16
Personal Services	453,052.21	429,945	429,945	0	429,945	429,945	0	429,945
Operating Expenses	125,903.79	115,681	258,955	3,937	262,892	266,409	4,391	270,800
Equipment	11,999.21	14,460	14,460	0	14,460	14,460	0	14,460
Transfers	71,591.59	0	0	0	0	0	0	0
Total Agency Costs	\$662,546.80	\$560,086	\$703,360	\$3,937	\$707,297	\$710,814	\$4,391	\$715,205
Current Unrestricted Fund	662,546.80	560,086	703,360	3,937	707,297	710,814	4,391	715,205
Total Funding Costs	\$662,546.80	\$560,086	\$703,360	\$3,937	\$707,297	\$710,814	\$4,391	\$715,205

# PUBLIC SERVICE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	4.69	4.69	4.69	.00	4.69	4.69	.00	4.69
Personal Services	154,976.20	158,346	158,346	2,993	161,339	158,346	2,993	161,339
Operating Expenses	55,617.81	34,344	34,663	-2,993	31,670	34,704	-2,993	31,711
Total Agency Costs	\$210,594.01	\$192,690	\$193,009	\$0	\$193,009	\$193,050	\$0	\$193,050
Current Unrestricted Fund	210,594.01	192,690	193,009	0	193,009	193,050	0	193,050
Total Funding Costs	\$210,594.01	\$192,690	\$193,009	\$0	\$193,009	\$193,050	\$0	\$193,050

## OPERATION & MAINTENANCE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	67.60	67.60	67.60	.00	67.60	67.60	.00	67.60
Personal Services	2,682,550.52	1,725,596	1,788,471	0	1,788,471	1,788,471	0	1,788,471
Operating Expenses	2,691,754.86	3,668,615	3,693,456	6,515	3,699,971	3,669,026	11,566	3,680,592
Equipment	44,075.71	205,089	205,089	-175,089	30,000	205,089	-175,089	30,000
<b>Total Agency Costs</b>	<b>\$5,418,381.09</b>	<b>\$5,599,300</b>	<b>\$5,687,016</b>	<b>\$-168,574</b>	<b>\$5,518,442</b>	<b>\$5,662,586</b>	<b>\$-163,523</b>	<b>\$5,499,063</b>
Current Unrestricted Fund	5,418,381.09	5,599,300	5,687,016	-168,574	5,518,442	5,662,586	-163,523	5,499,063
<b>Total Funding Costs</b>	<b>\$5,418,381.09</b>	<b>\$5,599,300</b>	<b>\$5,687,016</b>	<b>\$-168,574</b>	<b>\$5,518,442</b>	<b>\$5,662,586</b>	<b>\$-163,523</b>	<b>\$5,499,063</b>

## SCHOLARSHIPS & FELLOWSHIPS

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr	Recommended	Base	Fiscal 1993 Incr/Decr	Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00	.00	.00
Personal Services	788.99	0	0	0	0	0	0	0
Operating Expenses	1,163,298.06	1,077,497	1,077,497	0	1,077,497	1,077,497	0	1,077,497
<b>Total Agency Costs</b>	<b>\$1,164,087.05</b>	<b>\$1,077,497</b>	<b>\$1,077,497</b>	<b>\$0</b>	<b>\$1,077,497</b>	<b>\$1,077,497</b>	<b>\$0</b>	<b>\$1,077,497</b>
Current Unrestricted Fund	1,164,087.05	1,077,497	1,077,497	0	1,077,497	1,077,497	0	1,077,497
<b>Total Funding Costs</b>	<b>\$1,164,087.05</b>	<b>\$1,077,497</b>	<b>\$1,077,497</b>	<b>\$0</b>	<b>\$1,077,497</b>	<b>\$1,077,497</b>	<b>\$0</b>	<b>\$1,077,497</b>



# SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer	Recommended	Base	Fiscal 1993 Incr/Deer	Recommended
Full Time Equivalent Employees	254.87	254.87	282.57	.72	283.29	282.57	.72	283.29
Personal Services	8,226,454.11	7,025,669	8,852,615	20,431	8,873,046	8,852,615	20,431	8,873,046
Operating Expenses	2,378,878.16	4,181,620	2,367,781	5,335	2,373,116	2,252,199	5,335	2,257,534
Equipment	857,935.50	0	907,228	0	907,228	948,272	0	948,272
<b>Total Agency Costs</b>	<b>\$11,463,267.77</b>	<b>\$11,207,289</b>	<b>\$12,127,624</b>	<b>\$25,766</b>	<b>\$12,153,390</b>	<b>\$12,053,086</b>	<b>\$25,766</b>	<b>\$12,078,852</b>
Current Unrestricted Fund	11,463,267.77	11,207,289	12,127,624	25,766	12,153,390	12,053,086	25,766	12,078,852
<b>Total Funding Costs</b>	<b>\$11,463,267.77</b>	<b>\$11,207,289</b>	<b>\$12,127,624</b>	<b>\$25,766</b>	<b>\$12,153,390</b>	<b>\$12,053,086</b>	<b>\$25,766</b>	<b>\$12,078,852</b>

## Role and Scope Statement

### NATURE OF THE INSTITUTION

Since receiving its charter in 1893, the University of Montana has evolved into a comprehensive, doctoral level university with a home campus at Missoula, a separate campus at Dillon, residence centers in numerous locations, and broad responsibilities statewide for on-site and technological delivery of academic programs and services. As a major public university, the University of Montana generates new knowledge through research and creative activities, transmits that knowledge through its instructional programs, and commits its academic resources to the public good through a variety of service activities, including important contributions to Montana's economic development. Excellence is expected in all these areas. Admission, at both the undergraduate and graduate levels, is competitive, under policies endorsed by the Board of Regents of Higher Education.

The University of Montana has been recognized as the center of liberal education in Montana and will be supported in its efforts to perpetuate a rich academic tradition which for

decades has constituted a special and unusual asset to Montana and the Rocky Mountain West, and which has given the University its special character within the Montana University System. Consistent with both its heritage and its comprehensive mission, the University of Montana maintains extensive and diverse academic offerings, fostering dialogue between professional schools and academic disciplines, sciences and humanities, theorists and practitioners. Equal emphasis is placed on traditional learning -- through a rigorous general education requirement for all students and through undergraduate and graduate degree offerings in the humanities and the social, behavioral, physical and biological sciences -- and on specialized academic and professional career preparation in the Graduate School and in the schools of Business Administration, Education, Fine Arts, Forestry, Journalism, Pharmacy and Allied Health Sciences, and Law. Through a variety of faculty and student exchanges, research partnerships, diverse offerings in languages and cultures, Mansfield Center programs, and other special efforts, the University has established a unique role in international programming; this special commitment will continue.

## AREAS OF EMPHASIS

The University of Montana is assigned exclusive responsibility within the Montana University System for instructional programs in Journalism, Law, Forestry, Pharmacy, Physical Therapy, and Social Work, and currently offers the only graduate degree programs in Accounting, Business Administration and Administrative Sciences. Lead responsibility for graduate offerings in the humanities, the arts, and the social and behavioral sciences will remain a key institutional mission. Appropriate instructional and other academic entities should be combined into a Center for Western Studies. The University shares lead responsibility in the physical and biological sciences and the allied health professions.

The Montana Science and Technology Alliance has sited the Center of Excellence in Biotechnology at the University of Montana which it operates in partnership with Montana State University. The University of Montana also cooperates with Montana State University and Eastern Montana College in the Montana Entrepreneurship Center. In addition to the teaching and scholarly resources within each department and school, the University maintains a number of specialized laboratories, institutes and facilities: Yellow Bay Biological Station, Montana Forest and Conservation Experiment Station, Maureen and Mike Mansfield Center for Public Affairs, Wood Chemistry Laboratory, Bureau of Business and Economic Research, Division of Educational Research and Services, Stella Duncan Memorial Institute, Montana Water Resources Research Center (in cooperation with Montana State University), Geology Field and Research Station at Dillon, Montana University Affiliated Program/Institute for Human Resources in Rural America including Rural Rehabilitation Training Center, Montana Defender Project, Center of Excellence in Biotechnology, Montana Entrepreneurship Center, Center for Population Research, Wilderness Institute, Telecommunications Center (including KUFM), Montana Repertory Theatre, Bureau of Press and Broadcasting Research, Clinical Psychology Center, Center for Continuing Education and Summer Programs, Cooperative Wildlife Research Unit, Montana Public Policy Research Institute, Institute for Tourism and Recreation, and Speech, Hearing and Language Clinic.

## AREAS OF CONTINUING DEVELOPMENT

The University of Montana will maintain its commitment to program diversity through an essential balance between liberal learning and professional preparation. Nonacademic support services, essential to the quality of student life, will remain an institutional priority. The University will continue to respond to the needs of citizens for courses and programs through continuing education, telecommunications, and higher education centers in accord with regental policies; this responsibility is particularly strong in those areas in which the University has been assigned exclusive professional or graduate programmatic responsibility within the system. The University will be encouraged to strengthen its international programming, especially toward the peoples of the Pacific Rim. Programs related to Montana's K-12 educational system, to economic development, and to environmental quality will receive sustained support.

## DEGREE LEVELS

The University of Montana awards associate, bachelor's, master's, specialist and doctoral degrees, as well as certificates of completion, among its more than fifty undergraduate and more than forty graduate and first-professional disciplines. In addition, it maintains, through its Night School and through a variety of developmental programs, access for nondegree students.

## CONSTITUENCIES SERVED

Consistent with its status as a major public university, the University of Montana recognizes multiple constituencies, local national, and international. Its student population will remain cosmopolitan, with large numbers of graduate, international, off-campus, out-of-state, and non-traditional student enrollments. Local students will continue to benefit from the University's developmental and Night School programs, while telecommunications and other continuing education activities will continue to address the increasing demands of a statewide constituency.

## AGENCY ORGANIZATION

President - The president is responsible for administering Board of Regents policies under the supervision and control of the Commissioner of Higher Education. He provides educational leadership for the campus and its community, maintains good public relations, and holds final authority and responsibility for financial management of the university.

Intercollegiate Athletics - The university is a Division I member of the National Collegiate

Athletic Association and the Big Sky Conference. The primary commitment of the Athletic Department is to provide an opportunity for student athletes to achieve their maximum potential academically and athletically.

EEO Officer - The EEO Officer is responsible for pursuing equity in the university's hiring and promotion practices. The university has made substantial progress in gender and racial equity in recent years.

Legal Counsel- This office provides counseling on all legal matters involving the university.

University of Montana (UM) Foundation- The UM Foundation is a corporation legally separate from the university, but serves as the official development office for the university. The foundation provides leadership for the annual Excellence Fund drive and periodic capital campaigns.

University of Montana Alumni Association- The Alumni Association is a private corporation, but the director and staff are University employees. During the past five years, the university has devoted increased attention to the association, including creation of an alumni magazine, frequent alumni gatherings throughout the United States, trips sponsored by the Alumni Association, and a variety of similar activities.

Vice President for Administration and Finance - The Vice President for Administration and Finance administers the university's fiscal (accounting, auditing, budgeting), computing, human resource, campus services, and physical plant activities.

Provost and Vice President for Academic Affairs - The Provost directs and coordinates all university academic activity including program evaluations, faculty hiring and evaluations, and accreditations. He also directs the university in the president's absence.

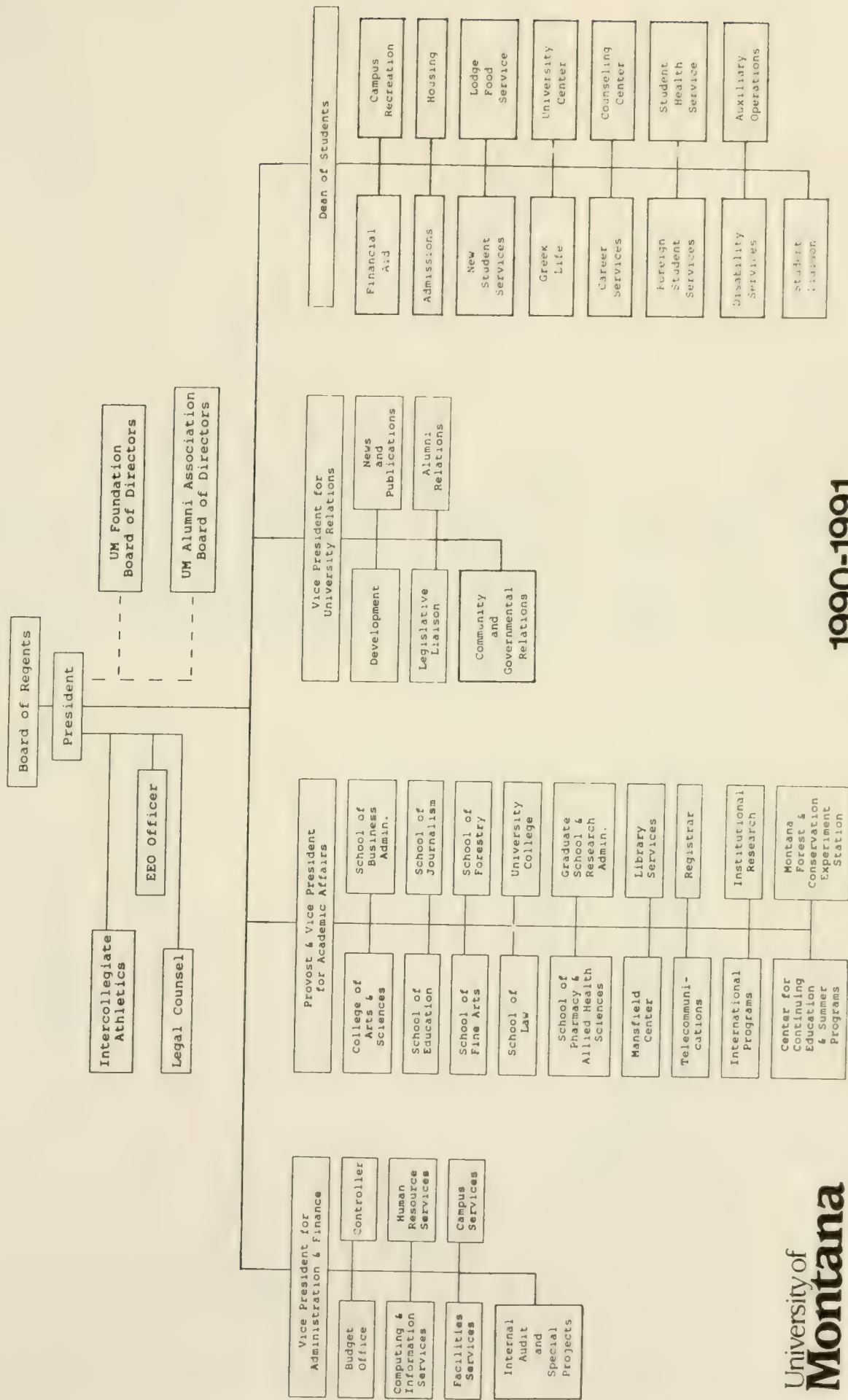
Vice President for University Relations - This office is responsible for strengthening the university's relationship with alumni, legislators, current and prospective donors, the business community, potential students, and any others who might be classified as "friends of the university."

Dean of Students - The Dean of Students is responsible for supporting and enhancing the academic mission and quality of student life at the University of Montana. The Dean is also responsible for general advocacy for students and the administration of the Student Conduct Code for non-academic misconduct.



# UNIVERSITY OF MONTANA

## ORGANIZATIONAL CHART



UNIVERSITY OF MONTANA  
Missoula, Montana

EXECUTIVE OFFICERS:

President: George M. Dennison  
Provost & Vice President for Academic Affairs: Donald E. Habbe  
Vice President for Administration and Finance (Acting): Sylvia K. Weisenburger  
Vice President for University Relations: Sheila M. Stearns  
Dean of Students: Barbara B. Hollmann  
Legal Counsel: Joan B. Newman

UNIVERSITY OF MONTANA CAMPUS PROFILE

ENROLLMENT: Fall 1989

7,841 Undergraduate  
1,838 Graduate  
9,679 Total (Headcount)  
8,538 FTE  
8,530 FTE (Unrestricted)

STUDENT PROFILE:

49% Male  
51% Female  
81% Undergraduate  
78% Montana Residents  
39% 25 years or older  
249 Foreign Students  
23 Average Age

FTE EMPLOYEES (Unrestricted):\*\*

404.9	Contract Faculty	
106.2	Contract Professional	
63.1	T.A.'s	33.2
348.0	Classified	13.6
50.4	Part-Time & Other	127.9
972.6	Total	Total

DECLARED MAJORS BY FIELD  
(1989 Fall Headcount):

4,966 Arts & Sciences  
1,813 Business Administration  
978 Education  
347 Fine Arts  
523 Forestry  
317 Journalism  
211 Law  
524 Pharmacy & Allied Health

DEGREES AWARDED (1990):

1,053	Baccalaureate	118	Baccalaureate
301	Masters	4	Masters
29	Doctorate	70	Associate
71	First Professional		
14	Associate		

PEER INSTITUTIONS:

Northern Arizona University  
University of Idaho  
New Mexico State University  
University of North Dakota  
North Dakota State University  
Utah State University  
University of Wyoming  
University of Nevada, Reno

ACCREDITATION: 1989-90

Northwest Association of Schools and Colleges	University of Montana
National Association of Schools of Art and Design	Art
American Assembly of Collegiate Schools of Business	School of Business Administration
National Association of Schools of Theater	Drama

National Council for Accreditation of Teacher Education	Teacher Education Programs	Twenty-five Rhodes Scholars - UM ranks fifth in the nation among public institutions(excluding military academies) in terms of the number of students who have received Rhodes Scholarships to Oxford University in England. Philosophy major Bridget Clarke of Missoula is the latest recipient.
Montana State Board of Education		
National Athletic Trainers' Association	Health and Physical Education Department's Athletic Training Program	Eight Truman Scholars - The Truman Scholarship is a prestigious, full scholarship instituted by Congress to support students with a commitment to a career in government.
Society of American Foresters	School of Forestry	Twenty-five Sears Congressional Interns - Throughout the 20-year history of that program, UM has ranked first in the country in the number of journalism students selected for Sears internships in Washington, D.C.
American Council on Education in Journalism and Mass Communications	School of Journalism - News-Editorial and Radio-Television Programs	Sixty-five percent placement of UM graduates in medical school, higher than the national average of about 60 percent. UM graduates also exceed the national average for placement in dentistry, optometry and veterinary school.
Association of American Law Schools	School of Law	UM's Creative Writing Program produces poets and fiction writers of national stature such as James Welch, '65, who earned the Los Angeles Times national book award for <u>Fools Crow</u> .
American Bar Association	Music	Exchanges with universities in China, Japan and New Zealand, and Study Abroad programs in Austria, France, Spain, and Mexico.
National Association of Schools of Music	School of Pharmacy	In the spring of 1990, all 40 UM pharmacy graduates who took the National Association of Board of Pharmacy Licensing Exam passed on the first attempt. UM students' scores on that exam ranked about four percent higher than the national average.
American Council on Pharmaceutical Education	Physical Therapy	In eight out of the last nine years, a team from the UM Law School has qualified for the finals in the national Moot Court Competition. The 1981 UM team won the national title.
American Physical Therapy Association	Clinical Psychology	Eighty Montana businesses are served annually at no cost by consultants in UM's Small Business Institute.
American Psychological Association	Social Work	UM accounting students' success in passing all four sections of the C.P.A. examination on the first attempt consistently ranks the University among the top 1 percent in the nation.
Council on Social Work Education	Animal Care Facility	
American Association for Accreditation of Laboratory Animal Care		



## SPECIAL FEATURES:

UM was one of about 100 "outstanding public universities" recently profiled in How to Get an Ivy League Education at a State University by Martin Nemko. UM's selection was based upon criteria such as faculty quality, undergraduate excellence, opportunities for international honors study, and location.

The Center of Excellence for Biotechnology, designated by the Montana Science and Technology Alliance, provides support for Montana's growing biotechnology industry.

The Montana Repertory Theatre, the only professional Equity company between Minneapolis and Seattle, performs throughout the region.

Flathead Lake Biological Station, the oldest active biological station in the nation, is a world-renowned facility for ecological studies and freshwater research.

The Lubrecht Experimental Forest, a 28,000-acre research and teaching forest, offers students and researchers a wealth of insights into all aspects of natural-resource management.

The Bureau of Business and Economic Research gathers and analyzes information on Montana's economy and publishes the award-winning Montana Business Quarterly.

The Telecommunications Center houses KUFM, Montana's first public radio station. Together with KGPR in Great Falls, the station serves an area with about 300,000 residents.

UM offers off-campus master's degree programs in Great Falls (M.A.S.), Helena (M.P.A. and Billings (M.B.A.). Montana's first telecommunication course was transmitted to Billings from UM in 1988 via an interactive microwave television network.

The Maureen and Mike Mansfield Center offers courses, organizes international exchange programs and conducts research. The center also holds an annual public conference in which internationally known speakers focus on ethics and public affairs or modern Asian affairs. Recent participants have included former President Jimmy Carter, former Vice President Walter Mondale and consumer advocate Ralph Nader.

The Center for Continuing Education and Summer Programs each year hold hundreds of conferences and workshops attended by thousands of Montanans across the state. In 1988-89, courses were offered to more than 6,900 Montanans in 52 communities.

UM Journalism graduates have earned seven Pulitzer Prizes, including two-time winner Jonathan Krim, a 1977 UM honors graduate who is now the metro editor for the San Jose Mercury News. Krim has directed two Pulitzer-winning reporting teams: in 1986 for stories

on the Marcos family and the Philippines and the 1989 coverage of the San Francisco earthquake.

The School of Business Administration is the only School of Business in the state accredited at both the undergraduate and graduate levels.

**WESTERN MONTANA COLLEGE  
OF  
THE UNIVERSITY OF MONTANA**

**Montana University System**





# WESTERN MONTANA COLLEGE OF THE UNIVERSITY OF MONTANA

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	101.82	102.04	108.56	.30	108.86	.30	108.86
Personal Services	3,553,496.73	3,388,697	3,891,494	1,761	3,893,255	1,879	3,893,266
Operating Expenses	932,517.14	1,298,681	923,216	-31,797	891,419	-32,264	892,137
Equipment	31,659.74	29,262	50,922	-16,437	34,485	-16,437	35,355
<b>Total Agency Costs</b>	<b>\$4,517,673.61</b>	<b>\$4,716,640</b>	<b>\$4,865,632</b>	<b>\$-46,473</b>	<b>\$4,819,159</b>	<b>\$-46,822</b>	<b>\$4,820,758</b>
Current Unrestricted Fund	4,517,673.61	4,716,640	4,865,632	-46,473	4,819,159	-46,822	4,820,758
<b>Total Funding Costs</b>	<b>\$4,517,673.61</b>	<b>\$4,716,640</b>	<b>\$4,865,632</b>	<b>\$-46,473</b>	<b>\$4,819,159</b>	<b>\$-46,822</b>	<b>\$4,820,758</b>
Instruction	2,179,490.94	2,321,923	2,423,539	0	2,423,539	0	2,423,539
Operation & Maint Of Plant	708,338.88	823,342	820,853	-55,338	765,515	-55,687	764,369
Scholarships & Fellowships	115,333.22	107,889	107,889	0	107,889	0	107,889
Support	1,514,510.57	1,463,486	1,513,351	8,865	1,522,216	8,865	1,524,961
<b>Total Program Costs</b>	<b>\$4,517,673.61</b>	<b>\$4,716,640</b>	<b>\$4,865,632</b>	<b>\$-46,473</b>	<b>\$4,819,159</b>	<b>\$-46,822</b>	<b>\$4,820,758</b>

## INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	56.51	56.73	59.18	.00	59.18	.00	59.18
Personal Services	1,945,279.81	1,989,539	2,269,362	-1,905	2,267,457	-1,905	2,267,457
Operating Expenses	228,942.89	327,384	150,751	1,893	152,644	1,893	152,644
Equipment	5,268.24	5,000	3,426	12	3,438	12	3,438
<b>Total Agency Costs</b>	<b>\$2,179,490.94</b>	<b>\$2,321,923</b>	<b>\$2,423,539</b>	<b>\$0</b>	<b>\$2,423,539</b>	<b>\$0</b>	<b>\$2,423,539</b>
Current Unrestricted Fund	2,179,490.94	2,321,923	2,423,539	0	2,423,539	0	2,423,539
<b>Total Funding Costs</b>	<b>\$2,179,490.94</b>	<b>\$2,321,923</b>	<b>\$2,423,539</b>	<b>\$0</b>	<b>\$2,423,539</b>	<b>\$0</b>	<b>\$2,423,539</b>

## OPERATION AND MAINTENANCE OF PLANT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	14.35	14.35	14.35	.00	14.35	.00	14.35
Personal Services	504,081.98	539,619	538,778	0	538,778	0	538,778
Operating Expenses	196,952.65	259,461	257,813	-38,381	219,432	-38,730	218,286
Equipment	7,304.25	24,262	24,262	-16,957	7,305	-16,957	7,305
<b>Total Agency Costs</b>	<b>\$708,338.88</b>	<b>\$823,342</b>	<b>\$820,853</b>	<b>\$-55,338</b>	<b>\$765,515</b>	<b>\$-55,687</b>	<b>\$764,369</b>
Current Unrestricted Fund	708,338.88	823,342	820,853	-55,338	765,515	-55,687	764,369
<b>Total Funding Costs</b>	<b>\$708,338.88</b>	<b>\$823,342</b>	<b>\$820,853</b>	<b>\$-55,338</b>	<b>\$765,515</b>	<b>\$-55,687</b>	<b>\$764,369</b>

## SCHOLARSHIPS AND FELLOWSHIPS

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00	.00
Operating Expenses	115,333.22	107,889	107,889	0	107,889	0	107,889
<b>Total Agency Costs</b>	<b>\$115,333.22</b>	<b>\$107,889</b>	<b>\$107,889</b>	<b>\$0</b>	<b>\$107,889</b>	<b>\$0</b>	<b>\$107,889</b>
Current Unrestricted Fund	115,333.22	107,889	107,889	0	107,889	0	107,889
<b>Total Funding Costs</b>	<b>\$115,333.22</b>	<b>\$107,889</b>	<b>\$107,889</b>	<b>\$0</b>	<b>\$107,889</b>	<b>\$0</b>	<b>\$107,889</b>

## SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	30.96	30.96	35.03	.30	35.33	.30	35.33
Personal Services	1,104,134.94	859,539	1,083,354	3,666	1,087,020	3,784	1,087,031
Operating Expenses	391,288.38	603,947	406,763	4,691	411,454	4,573	413,318
Equipment	19,087.25	0	23,234	508	23,742	508	24,612
<b>Total Agency Costs</b>	<b>\$1,514,510.57</b>	<b>\$1,463,486</b>	<b>\$1,513,351</b>	<b>\$8,865</b>	<b>\$1,522,216</b>	<b>\$8,865</b>	<b>\$1,524,961</b>
Current Unrestricted Fund	1,514,510.57	1,463,486	1,513,351	8,865	1,522,216	8,865	1,524,961
<b>Total Funding Costs</b>	<b>\$1,514,510.57</b>	<b>\$1,463,486</b>	<b>\$1,513,351</b>	<b>\$8,865</b>	<b>\$1,522,216</b>	<b>\$8,865</b>	<b>\$1,524,961</b>



# ROLE AND SCOPE STATEMENT

## NATURE OF THE INSTITUTION

Western Montana College of the University of Montana is a rural four-year college located in the southwestern Montana town of Dillon. Established in 1893 as the state's normal school, Western's primary focus has always been teacher education. Accordingly, excellence in undergraduate instruction, derived from close student-faculty relationship, is focal while public service and research activities contribute to the broader mission of the institution. July of 1988 ushered in a new era of evolving cooperative relationships between Western and the University of Montana, as the two institutions were merged administratively. Western functions as a separately accredited, independently budgeted branch campus of the university.

## AREAS OF EMPHASIS

Western's leadership role in delivering instruction and research in teacher education encompasses on-and off-campus components, which impact both baccalaureate-level students and a much wider range of Montanans. Educating teachers for service to Montana's and the nation's smaller schools in rural areas is a particular mission of the campus. Research in rural education and outreach to the rural community are vital extensions of this role. A unique vision of the content and sequence of experiences for the pre-service teacher provides enriching off-campus contact for students throughout their academic lives. Extensive continuing education offerings are directed toward career development of in-service teachers.

## AREAS OF CONTINUING DEVELOPMENT

A number of associate degree programs in the arts, sciences, business, and education serve as vehicles for student diversification and transferability to other institutions of higher education. These programs also assist area students requiring retraining or more immediate entry into the workplace. Particularly noteworthy are newly initiated programs in early childhood education and tourism/recreation. Institutional commitment, coupled with federal Title III funds, has resulted in implementation of developmental education offerings for those students entering college underprepared in various academic areas.

## DEGREE LEVELS

Western offers degrees at the associate and bachelor's degree levels and participates in a master's degree in education offered by the University of Montana.

## CONSTITUENCIES SERVED

Activities of Western Montanan College of the University of Montana are derived from and dedicated to Montana's people. The College provides services to southwestern Montana as well as the entire state, especially the rural sector. Traditional and non-traditional students are integral to current activities and in the college's future. Service to educators in the state is primary, but small businesses and other commercial and governmental concerns have recently benefitted from outreach efforts.

## ORGANIZATION

Office of College Relations, headed by the Director of Development works with constituent groups such as alumni, businesses, granting agencies, Century Club and the foundation to raise non-state funds for the college

Student Affairs, headed by the Dean of Students works with students in non-academic programs which provide student services and assistance through financial aid, counseling, athletics, day care, residents halls, admissions, and other student activities.

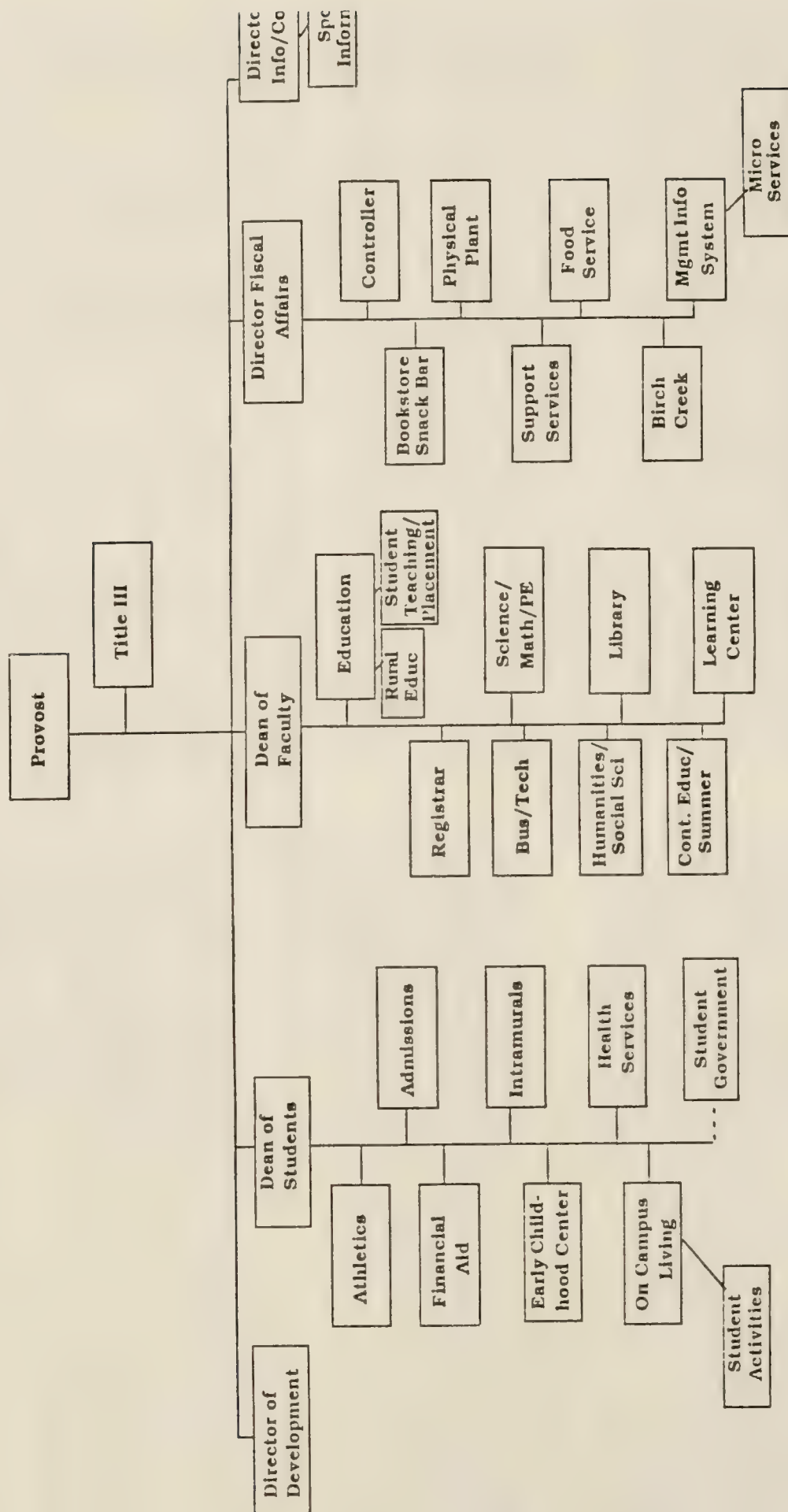
Instruction/Academic Support, headed by the Dean of faculty provides instructional services and support to students. It includes classroom instruction, extension courses off-campus, and support such as the Library and Learning Center.

Fiscal Affairs, headed by the Director of Fiscal Affairs provides administrative and financial services such as business office, personnel management, campus computing services, support services, and supervision of auxiliary services and physical plant

Office of Information, headed by the Director of Information provides public information about events at the college and designs and edits publications, mailers, and all other printed material leaving the campus.



# Western Montana College of the Unlverslty of Montana Organizational Chart 1989



WESTERN MONTANA COLLEGE  
OF THE UNIVERSITY OF MONTANA  
Dillon, Montana

Provost, Western Montana College of the University of Montana: W. Michael Easton

WESTERN MONTANA COLLEGE CAMPUS PROFILE\*

ENROLLMENT: Fall 1989

889	Undergraduate
102	Graduate
991	Total (Headcount)
827	FTE

WESTERN MONTANA COLLEGE CAMPUS PROFILE\*

ENROLLMENT: Fall 1989

STUDENT PROFILE:

48%	Male
52%	Female
92%	Montana Residents
26	Average Age

FTE EMPLOYEES (Unrestricted):

57.1	Contract Faculty
24.0	Contract Professional
33.2	Classified
13.6	Part-Time & Other
127.9	Total

DECLARED MAJORS BY FIELD  
1988 Fall Headcount:

2	American Studies
127	Business Administration & Management
13	Secretarial Technology
504	Education
344	General & Undecided
1	Natural Heritage

DEGREES AWARDED (1987):

118	Baccalaureate
4	Masters
70	Associate

PEER INSTITUTIONS:

Western New Mexico University  
Mayville State University, ND  
Valley City State University, ND  
Dakota State College, SD

## PROFESSIONAL OFFICES AND HONORS:

Board of Directors, National Rural Association - Alan Zetler  
President, Grand Canyon Society - Frank Tikalsky

Henfield Foundation Award for Creative Writing - Ron Fischer  
Chair, American Alliance for Theater in Education Conference Committee:  
Judith Ulrich

Board of Directors, Northwest Association of Teacher Educators - John Rogan

Vice President, Montana Technology Education Association: Jim Valach  
Regional Coordinator, Montana Recreation and Parks Association: John Bailey

Vice President, Montana Audubon Council: Jack Kirkley

Board Member, Montana Association of Teachers of English and Language Arts:  
Jane Maddock

Secretary-Elect, Rocky Mountain Modern Language Association: Richard  
Turner

President-Elect, Montana Business Education Association: Cheri Jimeno

Secretary-Treasurer, Industrial Technology Education Association: Cleo Sutton

Academic Guest, University of Zurich: Craig Zaspel

Immediate Past President, Montana Academy of Sciences: Keith Parker

Fulbright Fellowship: Cheri Jimeno

## Recent Faculty Publications:

"How to Construct a Transparent Plastic Reflector," The Montana Mathematics  
Teacher, Otis Thompson

"A Mini-Review of the Pharmacology and Toxicology of Marijuana," Proc.  
Mont. Academy of Sciences, Keith Parker

Water Economy of Nestling Swainson's Hawks, Condor in press (February, 1990),  
Kirkley, J.S. and J.A. Gessaman

"Curriculum Texts: The Portrayal of the Field, Part I," Journal of Curriculum  
Studies, John Rogan

"Present Hopes? Future Dreams: Maybe Not," Cadenza (Montana Music  
Educators Association), David Warner

"Cusp Catastrophe in the Ferromagnetic Resonance Spectrum of a Layered  
Ferromagnet," Physical Review, Craig Zaspel

"A Cross-Cultural Examination of the Structure of Children's Fears," The  
Journal of Cross-Cultural Psychology, Frank Tikalsky

Effects of Whole-Tree Harvest of Epilithic Bacterial Populations in  
Headwater Streams," Journal of Microbial Ecology, Karl Ulrich

"The Motivations of Unsafe Skiing Behavior," Ski Area Management,  
Sylvester Lahren and Frank Tikalsky

"Building a Rationale for Uniqueness in a Liberal Arts Setting: Teacher  
Education at Berea College," New Directions in Teacher Education, Walter  
Oldendorf

"Project Excellence: The Heart and Soul of It," Cadenza, Claudette Morton

## EXAMPLES OF GRANTS AND CONTRACTS ACTIVITY:

### FEDERAL TITLE III FUNDING

Since 1985, Western Montana College of the University of Montana has received  
increased institutional funding through Federal Title III Institutional Aid Grant  
monies totalling \$2,038,704. As the only four-year college funded by Title III in  
Montana, Western has used the financial assistance to develop and implement  
several innovative curricular programs, activities and services, and upgrade the  
college's facilities and administrative and instructional equipment. The grant's  
thrust has been to enhance comprehensively all areas of the college. Through  
Title III funding, Western developed and implemented a comprehensive  
computerized Management Information System, created a developmental  
education program, increased student/faculty interaction in General Education,  
and increased the use of new technology and methodologies in both general  
education and teacher education. In addition, academic advising and placement  
and residence life have been  
improved, and articulation agreements and a comprehensive student retention  
program have been established.



## US WEST FOUNDATION/BIG SKY TELEGRAPH FUNDING

Western's Big Sky Telegraph, an innovative on-line rural education network program, is Montana's first recipient of the US WEST Foundation's major Educational Initiative grant. The current grant, totalling over \$283,200, provides the continuation of Big Sky Telegraph's mission to increase opportunities to rural educators and the larger rural community. The Telegraph now connects Montana's one-room schools through on-line computer technology to increase peer and resource access for Montana's isolated rural teachers. US WEST grant monies will assist in underlining Western's role in providing tele-networking access through affordable networking capabilities needed by educators and business people around the state and around the nation.

## IBM FUNDING

Western has been awarded over \$150,000 from the IBM Foundation to incorporate desktop training and personal computer technology in its teacher preparation curricula. Western's IBM grant is part of a national IBM program aimed at enhancing teacher training through technology. Only 50 such grants have been awarded by IBM to the nation's colleges; most grant recipients are education schools at larger universities. Designed to create a state-of-the-art computerized model teaching classroom, the IBM Foundation monies are being used at Western for the purchase of computer equipment, technical support and training for the model classroom project. The prestigious peer institutions awarded similar grants (which all will be linked through computer networking systems) include Ohio State University, the University of Nebraska, New Mexico State, and the University of New Mexico.

## INNOVATIVE PROGRAM DEVELOPMENT IN TEACHER EDUCATION AND EVALUATION

As an integral segment of Western's teacher education curriculum development, faculty members have developed and implemented a comprehensive teacher education program that culminates in student teaching and graduation with a degree in elementary or secondary education. The program (TEP) stresses satisfactory completion of academic requirements, in addition to completion of evaluative interviews and essays to ensure the student's progress is continually measured and evaluated. This innovative approach to measuring both the curriculum and the student has recently been expanded into a developmental model for teacher evaluation and effectiveness beyond graduation. In a recently created evaluation process, Western's faculty are beginning a long-term longitudinal study to survey the effectiveness of teachers in the classroom setting. This innovative study is unique in Montana, and has already been identified as a model evaluation process for studying teacher education programs in the state.

## TECHNOLOGY INNOVATION AND APPLICATION

The computer facilities available on the Western campus enhance the college's degree programs and integrate microcomputer technology in the Western education process. With one computer for every nine students, Western offers state-of-the-art technology. In addition to computer facilities for students on campus, Western also offers on-line computer access and information through Big Sky Telegraph and other remote delivery on-line computer classes. Big Sky Telegraph, a computer network program linking one-room schools from across the state, has earned international acclaim as one of the most versatile, user-friendly grassroots communications systems in the world.

## FUND FOR IMPROVEMENT OF POST-SECONDARY EDUCATION (FIPSE) FUNDING

Since 1987, a combination of federal and state dollars totalling \$140,133 has been awarded to Western to develop an undergraduate teacher training model to prepare educators for teaching in rural and small schools. The grant monies have enabled Western to create a number of field experience sites for sophomore and junior education students, as well as to develop a new teacher education program curriculum.

## MODEL DRUG EDUCATION PROJECT FUNDING

The U.S. Department of Education has awarded \$254,220 in grant monies to Western to develop and implement a drug education program for Montana's rural schools and communities. Western's model program serves Montana's smaller high schools and elementary schools with drug education program assistance and workshops. Networking assistance is designed to help train teachers, parents, and community leaders in the creation of their own local drug education projects.

## TECHNOLOGY EDUCATION GRANT FUNDING

Through the assistance of the Lab Technologies company in Colorado, Western's Technology Education program has received over \$145,000 worth of computer graphics software from Autodesk, Inc. Autodesk's software packages will assist Western's technology education students on all types of Computer-Aided Design (CAD) work, enabling students to do animation, desktop video, architectural design, color enhancing, and three-dimensional solid modeling. With this grant award, Western's Technology Education program will offer one of the premier computer graphics courses in the nation.

**OTHER GRANTS:**

\$42,835 - U.S. Forest Service Grant to provide business education to Job Corps enrollees.

\$61,745 - Energy Conservation Grant from the Department of Energy to reduce energy consumption through the use of retrofit and conservation measures.

\$ 4,200 - Institutional Research Grant from the American Cancer Society to study regulation of differentiation in CC Glioma.

\$ 4,000 - Adult Basic Education Grant from the Office of Public Instruction.

Over \$9,000 in grants for the Humanities from various state sources.

**Percentage of funded proposals:**

80% Federal

2% State

18% Private

1990 Western Montana College Awards: \$849,257







**MONTANA STATE UNIVERSITY**

**Montana University System**





# MONTANA STATE UNIVERSITY

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended	
Full Time Equivalent Employees	921.17	927.49	947.98	.83	948.81	.83	948.81
Personal Services	34,721,391.64	33,529,201	36,588,272	54,401	36,642,673	54,401	36,642,673
Operating Expenses	10,192,640.06	14,710,203	10,965,839	21,243	10,987,082	21,243	10,731,907
Equipment	1,713,767.00	727,411	1,914,407	-58,214	1,856,193	-58,214	1,916,745
Capital Outlay	741.50	524,561	0	0	0	0	0
Debt Service	43,651.87	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$46,672,192.07</b>	<b>\$49,491,376</b>	<b>\$49,468,518</b>	<b>\$17,430</b>	<b>\$49,485,948</b>	<b>\$17,430</b>	<b>\$49,291,325</b>
Current Unrestricted Fund	46,672,192.07	49,491,376	49,468,518	17,430	49,485,948	17,430	49,291,325
<b>Total Funding Costs</b>	<b>\$46,672,192.07</b>	<b>\$49,491,376</b>	<b>\$49,468,518</b>	<b>\$17,430</b>	<b>\$49,485,948</b>	<b>\$17,430</b>	<b>\$49,291,325</b>
Instruction	25,342,275.08	27,663,444	27,796,210	-11,150	27,785,060	-11,150	27,785,060
Organized Research	602,546.60	614,372	621,760	0	621,760	0	621,781
Public Service	10,748.62	10,752	10,752	0	10,752	0	10,752
Operation & Maint Of Plant	5,895,187.31	6,028,583	6,044,660	0	6,044,660	0	6,001,328
Scholarships & Fellowships	1,182,787.00	1,188,665	1,188,665	0	1,188,665	0	1,188,665
Support	13,638,647.46	13,985,560	13,806,471	28,580	13,835,051	28,580	13,683,739
<b>Total Program Costs</b>	<b>\$46,672,192.07</b>	<b>\$49,491,376</b>	<b>\$49,468,518</b>	<b>\$17,430</b>	<b>\$49,485,948</b>	<b>\$17,430</b>	<b>\$49,291,325</b>

## INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended	
Full Time Equivalent Employees	531.17	537.49	536.42	.00	536.42	.00	536.42
Personal Services	23,031,119.65	22,696,630	24,970,693	0	24,970,693	0	24,970,693
Operating Expenses	2,028,487.88	4,476,814	2,676,806	-11,150	2,665,656	-11,150	2,665,656
Equipment	251,534.41	490,000	148,711	0	148,711	0	148,711
Capital Outlay	75.00	0	0	0	0	0	0
Debt Service	31,058.14	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$25,342,275.08</b>	<b>\$27,663,444</b>	<b>\$27,796,210</b>	<b>\$-11,150</b>	<b>\$27,785,060</b>	<b>\$-11,150</b>	<b>\$27,785,060</b>
Current Unrestricted Fund	25,342,275.08	27,663,444	27,796,210	-11,150	27,785,060	-11,150	27,785,060
<b>Total Funding Costs</b>	<b>\$25,342,275.08</b>	<b>\$27,663,444</b>	<b>\$27,796,210</b>	<b>\$-11,150</b>	<b>\$27,785,060</b>	<b>\$-11,150</b>	<b>\$27,785,060</b>

# ORGANIZED RESEARCH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	14.53	14.53	14.53	.00	14.53	.00
Personal Services	425,322.03	427,690	434,472	0	434,472	0
Operating Expenses	156,189.29	104,328	107,074	58,214	107,095	58,214
Equipment	21,035.28	82,354	80,214	-58,214	80,214	-58,214
<b>Total Agency Costs</b>	<b>\$602,546.60</b>	<b>\$614,372</b>	<b>\$621,760</b>	<b>\$0</b>	<b>\$621,781</b>	<b>\$0</b>
Current Unrestricted Fund	602,546.60	614,372	621,760	0	621,781	0
<b>Total Funding Costs</b>	<b>\$602,546.60</b>	<b>\$614,372</b>	<b>\$621,760</b>	<b>\$0</b>	<b>\$621,781</b>	<b>\$0</b>

# PUBLIC SERVICE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	.22	.22	.22	.00	.22	.00
Personal Services	10,252.62	9,752	9,752	0	9,752	0
Operating Expenses	496.00	1,000	1,000	0	1,000	0
<b>Total Agency Costs</b>	<b>\$10,748.62</b>	<b>\$10,752</b>	<b>\$10,752</b>	<b>\$0</b>	<b>\$10,752</b>	<b>\$0</b>
Current Unrestricted Fund	10,748.62	10,752	10,752	0	10,752	0
<b>Total Funding Costs</b>	<b>\$10,748.62</b>	<b>\$10,752</b>	<b>\$10,752</b>	<b>\$0</b>	<b>\$10,752</b>	<b>\$0</b>

# OPERATION AND MAINTENANCE OF PLANT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	77.81	77.81	77.81	.00	77.81	.00
Personal Services	1,850,431.73	1,738,649	1,867,413	31,156	1,867,413	31,156
Operating Expenses	3,878,259.89	3,610,316	4,122,190	-31,156	4,078,858	-31,156
Equipment	166,416.83	155,057	55,057	0	55,057	0
Capital Outlay	78.86	524,561	0	0	0	0
Total Agency Costs	\$5,895,187.31	\$6,028,583	\$6,044,660	\$0	\$6,001,328	\$0
Current Unrestricted Fund	5,895,187.31	6,028,583	6,044,660	0	6,001,328	0
Total Funding Costs	\$5,895,187.31	\$6,028,583	\$6,044,660	\$0	\$6,001,328	\$0

# SCHOLARSHIPS AND FELLOWSHIPS

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Operating Expenses	1,182,787.00	1,188,665	1,188,665	0	1,188,665	0
Total Agency Costs	\$1,182,787.00	\$1,188,665	\$1,188,665	\$0	\$1,188,665	\$0
Current Unrestricted Fund	1,182,787.00	1,188,665	1,188,665	0	1,188,665	0
Total Funding Costs	\$1,182,787.00	\$1,188,665	\$1,188,665	\$0	\$1,188,665	\$0



# SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	297.44	297.44	319.00	.83	319.83	319.83
Personal Services	9,404,265.61	8,656,480	9,305,942	23,245	9,329,187	9,329,187
Operating Expenses	2,946,420.00	5,329,080	2,870,104	5,335	2,658,240	2,663,575
Equipment	1,274,780.48	0	1,630,425	0	1,630,425	0
Capital Outlay	587.64	0	0	0	0	0
Debt Service	12,593.73	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$13,638,647.46</b>	<b>\$13,985,560</b>	<b>\$13,806,471</b>	<b>\$28,580</b>	<b>\$13,655,159</b>	<b>\$13,683,739</b>
Current Unrestricted Fund	13,638,647.46	13,985,560	13,806,471	28,580	13,655,159	13,683,739
<b>Total Funding Costs</b>	<b>\$13,638,647.46</b>	<b>\$13,985,560</b>	<b>\$13,806,471</b>	<b>\$28,580</b>	<b>\$13,655,159</b>	<b>\$13,683,739</b>

## ROLE AND SCOPE STATEMENT

# NATURE OF THE INSTITUTION

Montana State University is a comprehensive state university and is the land grant university for the state of Montana. With a student body of approximately 10,000 and a resident faculty of more than 500, MSU offers a broad range of baccalaureate and graduate degrees and also administers the Montana Agricultural Experiment Station and the Montana Extension Service. Emphasis is placed upon undergraduate and graduate education, upon research of both a basic and an applied nature, and upon professional and public service to the state, region and nation. Undergraduate admission is open to all high school graduates who have met the core curriculum and aptitude standards mandated by the Montana Board of Regents. Montana State University as part of its land grant mission takes an active interest in enhancing the educational and professional opportunities for all protected classes and has a special dedication to developing progressive options for Montana's Native American population.

## AREAS OF EMPHASIS

Consistent with its character as a land-grant university, Montana State University is the state's exclusive institution in the areas of Agriculture, Architecture, and Home Economics. It is, furthermore, the exclusive institution in the area of Film, sharing responsibility in Television; and is the exclusive institution in

Medicine, sharing responsibility for the biological sciences. It is the state's lead institution in the fields of Nursing, non-mining Engineering, Adult/Community and Higher Education, and Technology Education; and it is committed to maintaining its traditional excellence in the physical sciences and in Science-Math Education. Montana State University has been designated by the Montana Science and Technology Alliance as the site for the Center of Excellence in Synthesis and Characterization of Advanced Materials in cooperation with the University of Montana and Montana Tech. Montana State University is also a partner in the Center of Excellence in Biotechnology with the University of Montana and the Montana Entrepreneurship Center with Eastern Montana College and the University of Montana.

The recent creation of PBS-affiliate television station KUSM, the acquisition of a KU-band satellite uplink, the creation of a statewide telephone-modem access system to the Cat-Link computerized card catalog in Renne Library, and the campus' role in the Kellogg Foundation-funded, multi-state ICLIS (Intermountain Community Learning & Information Services) project: all of these serve to make MSU a focal point of electronic delivery of educational programs within the state.

Among many specialized programs, MSU houses the Area Health Education Center and the WAMI Medical Program; the Bureau of Educational Research and Community Education Center, and the Kellogg Center for Adult Learning Research; the Center for International Education, and various other globally oriented programs; the Engineering Experiment Station, the Water Resource

Center, the Science-Math Resource Center, the Center for the Synthesis and Characterization of Advanced Materials, the Institute for Process Analysis, and the Rural Technical Assistance Program; the Center for Native American Studies; the Local Government Center; the Museum of the Rockies; and a developing program in Molecular Biology.

#### **AREAS OF CONTINUING DEVELOPMENT**

Montana State University has developed, and will continue to develop a number of other professional and core academic programs. The professional degree programs in Architecture, Business, Education, Engineering and Nursing are fully accredited nationally; and it is a top priority of the university to maintain full national accreditation in each of these professions. In order to maintain the program in Accounting, and to comply with state law, it will be necessary to implement soon a five-year Accountancy program. Similarly, MSU has developed strong baccalaureate programs in the Arts, Humanities, Social Sciences, and Human Development; these are important both as core disciplines in support of the above-mentioned professional programs and as degree programs in their own right.

#### **DEGREE LEVELS**

Montana State University offers 46 degrees at the baccalaureate level, 39 at the masters level, and 14 doctoral degrees.

#### **CONSTITUENCIES SERVED**

Montana State University serves both resident students and statewide constituencies, the latter especially through the Extension Service and a multifaceted program of Continuing Education. As a part of its land-grant mission, the university offers a variety of programs in professional and advanced technical education both on and off campus. In addition, the institution serves government agencies, businesses, industries and professions, schools, and many other groups as well, in various ways--especially through a program of funded research and grants and contracts activity that in Fiscal Year 1989 totalled \$29,000,000.

# CAMPUS PROFILE: FALL 1989

## EXECUTIVE OFFICERS:

President: William J. Tietz  
Vice President for Academic Affairs: Michael P. Malone  
Vice President for Research: Robert J. Swenson  
Vice President for Administration: James L. Isch  
Vice President for Student Affairs: Rolf S. Groseth, Acting

## ENROLLMENT

9,016 Undergraduate  
473 Postbaccalaureate  
762 Graduate  
10,251 Total (Headcount)  
9,553 FTE  
9,543 FTE (Unrestricted)  
554 Nursing  
21 WAMI  
1,171 General Studies

## ENROLLMENT BY FIELD

651 Agriculture  
945 Arts & Architecture  
1,428 Business  
1,301 Education  
2,141 Engineering  
2,039 Letters & Science

## STUDENT PROFILE

44% Female  
88% Undergraduate  
87% Resident  
235 Foreign Students  
24.1 Average Age

## DEGREES AWARDED, FY 1989-90

1,493 Baccalaureate  
223 Masters  
42 Doctoral

## FTE EMPLOYEES (Unrestricted)

560.8 Contract Faculty & GTAs  
126.7 Contract Professional  
295.7 Classified  
89.0 Part-Time & Other  
1,072.2 Total

## PEER INSTITUTIONS

Northern Arizona University  
University of Idaho  
New Mexico State University  
University of North Dakota  
North Dakota State University  
Utah State University  
University of Wyoming  
University of Nevada-Reno



# ACCREDITATION:

		Last Review	Next Review
Northwest Association of Schools and Colleges	Montana State University	1985	1990
National Council for Accredita- tion of Teacher Education	Education Programs	1982	1991
* National League for Nursing	Nursing Program	1989	1997
* National Accreditation Council for Environmental Health Curricula	Environmental Health Program	1987	1995
Accreditation Board for Engineering and Technology: Engineering Programs	Agricultural & Civil Industrial & Management Electrical Mechanical Chemical	1985 1985 1988 1988 1988	1991 1991 1991 1991 1991
* Accreditation Board for Engineering and Technology: Technology Programs	Construction Mechanical Electrical & Electronic	1987 1987 1987	1990 1990 1990
* National Architectural Accrediting Board	Architecture Program	1987	1992
National Association of Schools of Art and Design	Art Program	1986	1991-92
National Association of Schools of Music	Music Program	1987	1991
American Assembly of Collegiate Schools of Business	Management Program Accountancy Program	1988	1996
* American Dietetic Association	Foods and Nutrition Program	1984	1990
* American Home Economics Association	Home Economics Program	1983	1993
American Psychological Association	Counseling & Psychological Services	1988	1993

## ACCREDITATION: (CONT.)

* International Association of Counseling Services	Counseling & Psychological Services	Last Review	1988	Next Review	1990
* American Chemical Society	Chemistry Department		1989		1994
* American Association of Museums	Museum of the Rockies		1986		1991
American Association for Accreditation of Laboratory Animal Care	Animal Resources Center		1990		1993
* Accreditation Association for Ambulatory Health Care	Student Health Service		1990		1993

## \* AGENCIES UNIQUE TO MSU

## SPECIAL FEATURES:

In 1990 the National Science Foundation designated a National Engineering Center of Excellence at Montana State University. The Engineering Research Center for Interfacial Microbial Process Engineering received a \$7.5 million, five-year grant -- one of the largest in the history of the Montana University System. The Center studies processes involving microorganisms to address industrial and environmental problems.

UTAP, the University Technical Assistance Program based in the College of Engineering, transfers technology from the university to private businesses. Its goal is to help Montana manufacturers become more competitive, thus saving or creating new jobs for Montana. During its first four years, UTAP gave in-depth assistance to 44 Montana manufacturers. UTAP gives brief assistance to about 100 businesses annually, interacts with organizations interested in economic development, and publishes a newsletter which circulates to over 700 manufacturers and other interested individuals.

Through MSU's wide-area computer network connection, researchers have electronic mail access to over 1000 colleges and universities via BITNet and to the National Science Foundation's supercomputer network and file archives via NorthWestNet. The InterNet connection of NorthWestNet also connects subscribers in government agencies and private industries with computer users at MSU.

MSU coordinates the Hazardous Material Management Program for all units in the university system, providing consultation and assistance for disposing of hazardous wastes in compliance with EPA regulations. Centralizing these services rather than establishing individual programs at each campus saved the State over \$290,000 during the 1988-89 biennium. This consortium concept was recognized in a national cost savings awards program.

KUSM, Montana's first fully licensed public television station, has been broadcasting from the MSU campus since 1984. The station provides PBS and locally produced educational programming for the Gallatin Valley, and through cable, for 27 other Montana communities.

The Center for Synthesis and Characterization of Advanced Materials (SACAM), praised as a national resource by the National Science Foundation, is an interdisciplinary research enterprise involving various fields of engineering, physics, and chemistry. Development of new materials for high technology applications is the research focus of the center. SACAM was designated the Material and Process Science Center of Excellence by the Montana Science and Technology Alliance.

The Burton K. Wheeler Center, funded by the Greater Montana Foundation and donations from the Wheeler family, opened in 1987 as a forum for objective discussions and exploration of Montana issues. The Wheeler Center sponsors an annual public lecture featuring nationally known speakers, an annual



conference, and publications to address timely issues. Last year's conference focused on "Public Lands and Federal Policy."

MSU contributes to the support of two theatre groups who bring drama, comedy, and musical offerings to communities throughout Montana. The Vigilante Players, a theatre-in-residence in MSU's Media and Theatre Arts Department since 1982, is a professional touring company dedicated to performing indigenous western material for audiences in the Northwest. Shakespeare in the Parks, now in its eighteenth season, brings classical theatre to thousands of Montanans every summer.

Agricultural research is conducted at eight off-campus Agricultural Experiment Station Research Centers distributed throughout the state. Technical assistance for farmers, ranchers, and their families is provided by subject-matter specialists and agents of the MSU Extension Service. More than 600,000 client contacts were recorded in 1989.

The Office of Continuing Education for the Health Professional offers continuing education workshops, seminars, and conferences to health care providers throughout the state and the Rocky Mountain region. Programs during 1989 reached over 2000 health care professionals.

The International Business Program, working in cooperation with state government and the private sector, provides training, research, and technical assistance for Montana firms operating in the international arena.

Service was provided through the Veterinary Research Laboratory's Electron Microscope Facility to faculty and students at MSU, and to professionals at the Atlantic Veterinary College, Belleville Labs, Montana Tale Corporation, USDA Poultry and Livestock Disease Institute, and the Washington State Fisheries Department.

Sister agreements with the Northwestern Polytechnical University in the People's Republic of China, Kusan University in South Korea, Wallongong University in Australia, Asia University in Tokyo, and schools in Kumamoto, Japan--the high school prefecture, Kumamoto University, and the Kumamoto University of Commerce--provide opportunities for research and cultural exchange.

The Local Government Center offers a variety of training and assistance programs for local government officials throughout the state. A \$406,000 grant from the Kellogg Foundation enables the Center to help local leaders learn to deal with such problems as tight budgets, complex service problems, and public decision-making. A recent \$393,000 grant from the Northwest Area Foundation

will fund a Montana Local Government Policy Council to set priorities for grant funded cooperative research to benefit rural communities.

The Office of Extended Studies and Summer Session provides educational opportunities for local citizens through its "MSU at Night" program, offering 70 undergraduate and graduate evening courses in 40 areas of study. The Office offers credit and noncredit educational opportunities for students throughout Montana. In 1989 more than 3800 students participated.

The Museum of the Rockies, visited by 176,000 people last year, presents the history and prehistory of the Northern Rockies through exhibits ranging from dinosaur fossils to a fully furnished 1930s house. A world-class planetarium, a Living History Park featuring a 100-year-old homestead, and expanded geology, paleontology, and astronomy exhibits opened in April 1989. Funds for the expansion were provided by private sources. A Museum-prepared "Great Dinosaur Exhibition" is currently on a two-year tour of Japan.

Through its association with Elderhostel, a liberal arts experience for older adults, MSU offered programs to over 400 people on campus and at Yellowstone National Park during 1989. At the other end of the age spectrum, MSU's youth programs include Peaks, Potential, and Special People, a summer camp for gifted and talented students in grades 5-9, and the Young Scholars Program, which connects gifted students throughout Montana to the MSU campus via a computer network during the school year.

The Employee Wellness Program (EWP) was created to help contain health care costs and improve the quality of life for MSU employees and their spouses. The EWP received a national award as an "Outstanding Community Health Promotion Program" from the US Department of Health and Human Services.

With a core of approximately half a million volumes, the MSU Libraries serve not only the research and teaching needs of students and faculty, but also a wide range of business and citizen needs statewide. The Libraries continue to be one of the main providers of materials through interlibrary loan in Montana, with over 7,000 loans made last year. CatTrac, an automated cataloguing system, will soon be available anywhere in Montana via microcomputer and modem.

#### **STUDENT PERFORMANCE: 1989-90**

A total of 251 students receiving Montana high school honor scholarships entered MSU for fall quarter, 1989. Sixty valedictorians and forty-two salutatorians from Montana high schools entered the freshman class, as well as twelve valedictorians and salutatorians from out-of-state high schools.



Thirty percent of 1989 fall freshmen earned "A" averages in their high schools, and 81.2 percent graduated from high school with a "B" average or better. The average high school grade point average of freshman entering MSU was 3.00.

Since 1984, MSU has ranked among the top ten institutions nationally in CPA examination pass rate.

Ninety-five percent of MSU's engineering graduates passed the Fundamentals of Engineering Exam. This continues to be one of the highest pass rates in the country.

For the past five years, the pass rate for MSU's nursing graduates on the professional board exam has been 98 percent.

MSU architecture graduates consistently score above the national average on the professional registration exam.

Ninety-six percent of MSU teacher education graduates equalled or exceeded the standards established by the state of Montana for passing scores on all portions of the National Teachers Exam. This exam must be taken by anyone seeking certification to teach in the state of Montana.

Major scholarships and fellowships awarded 1989-90 graduates included:

- One Truman Scholarship
- Two Barry M. Goldwater Scholarships
- Two National Science Foundation Graduate Research Fellowships

An MSU student served as president of the American Institute of Architecture Students for the 1989-90 academic year.

The MSU chapter of the Associated General Contractors of America was runner-up in the 14th annual Outstanding AGC Student Chapter contest. Nationally 130 student chapters competed for the award.

Within the Big Sky Conference, the student athletes at MSU are ranked first in Academic All-conference selections since 1976 and are also first in NCAA Post-Graduate Scholarship selections.

Sixty-two MSU students were named to the 1990 edition of "Who's Who Among Students in American Universities and Colleges."

ENTERING FRESHMEN TEST SCORES,  
FALL 1989

ACT	MSU		USA		SAT		MSU		USA	
	English	Math	Composite		Verbal	Math	464	530	428	476
	19.6	20.4	21.3	18.7	17.4	19.0				

FINANCIAL AID AWARDS, FY 1989-90

≈5,000	Students receiving financial aid through Title IV programs (50 percent)
≈\$4,000	Average financial aid award

CREDIT HOURS, 1990 GRADUATES

215	Average number of credit hours accumulated by baccalaureate degreed students
-----	--

EMPLOYMENT STATUS, 1989 GRADUATES

	Percent Employed-----				Not Seeking Work
	Desired Field	Other Field	Graduate School	Seeking Work	
Baccalaureate Degrees	80%	7%	11%	1%	1%
Graduate Degrees	81	2	16	0	1%

## AVERAGE SALARIES, 1989 GRADUATES

\$18,700	Agriculture
17,300	Arts and Architecture
20,440	Business
16,609	Education, Health and Human Development
28,039	Engineering
19,702	Letters & Science
23,399	Nursing
\$23,069	Baccalaureate Degrees
29,663	Masters Degrees
32,173	Doctoral Degrees

## FACULTY ACTIVITY: 1989-90

### PUBLICATIONS

MSU Faculty contribute to the expansion of knowledge in their fields by undertaking original research and publishing their findings in professional journals, popular magazines, books, and other avenues for communication. During the past year, faculty publications included

513	articles evaluated and recommended by peers
308	articles in popular magazines or outreach publications
39	monographs
82	book chapters
33	books

Over 350 films, concerts, and exhibits were also produced by faculty artists and musicians.

## PRESIDENTS OF NATIONAL AND INTERNATIONAL ORGANIZATIONS

### Presidents

American Phytopathological Society  
International Society for Biomechanics in Sport  
National Council of Architectural Registration Boards  
National Association for Computer-Aided Design in Architecture  
Biological Repair and Growth Society  
American Wildlife Society  
Physics and Chemistry of Semiconductor Interfaces

### Presidents

Elect American Agricultural Economics Association  
Surface Science Division of the American Vacuum Society

## EXAMPLES: ADVISORS TO MAJOR REGIONAL, NATIONAL, AND INTERNATIONAL COMMITTEES

National Endowment for the Humanities  
USSR Union of Film Makers  
National Association of Public Television Stations  
University Film and Video Association  
American Institute of Architects  
American Academy in Rome  
Association for Computing Machinery  
American Society for Engineering Education  
National Academy of Science/National Research Council  
American Cancer Society  
American Nurses' Association  
American Orthopsychiatric Association  
American Public Health Association  
American Red Cross  
March of Dimes  
United States Public Health Service  
Association for Consumer Research  
Entomological Society of America  
EPSCoR Coalition  
Society for Range Management  
President's Council of Economic Advisors  
National Barley Improvement Council  
Alfalfa Crop Advisory Committee  
Smithsonian Institute  
North American Kant Society  
National Oral History Association  
American Association of Geographers  
North American Council of Geostatistics  
Council of the American Statistical Association  
Popular Culture Association  
Northwest Association of Schools and Colleges  
US Senate Select Committee on Indian Affairs  
College Board Test Development Committee  
International Council of Shakespear Bibliographers  
American Library Association  
National Science Teachers' Association  
US Department of Education  
Commission on Adult Basic Education



**EXAMPLES: ADVISORS TO MAJOR REGIONAL, NATIONAL, AND INTERNATIONAL COMMITTEES (CONT.)**

National Council of Teachers of Mathematics  
 Western Agricultural Economics Association  
 Capital Opportunities Loan Review Board  
 Federal Human Resources Council  
 Wheat Industry Resource Committee  
 American Fisheries Society  
 Great Plains Agricultural Council  
 Environmental Protection Agency  
 US Marine Mammal Commission  
 Public Advisory Committee, American Physiological Society  
 National Science Board  
 NASA's Committee on Gravitational Physics and Astronomy  
 US Physics Olympiad Team  
 American Chemical Society  
 Council of Chemical Research  
 Academy of Criminal Justice Sciences  
 Scientific Advisory Committee, Greater Yellowstone Coalition  
 National Institutes of Health  
 National Science Foundation

**EXAMPLES: PARTICIPATION IN MONTANA COMMITTEES**

Montana Academy of Sciences  
 Montana Committee for the Humanities  
 Montana Council of Teachers of Mathematics  
 Montana Science Olympiad  
 Montana State Environmental Quality Council  
 Montana Society of Certified Public Accountants  
 Montana Library Association  
 Montana League for Nursing  
 Montana Nurses' Association  
 Montana Art Education Association  
 Montana State Board of Architects  
 Montana Science Advisory Council  
 Montana Art Education Association  
 Montana Arts Council  
 Montana Institute for the Arts  
 Montana Association of Colleges of Teacher Education

Montana Home Economics Association  
 Montana's Drought Management Steering Committee  
 Montana State Science Committee  
 Montana Indian Art and Culture Association

Ninety-three percent of MSU's faculty on tenure-track lines have terminal degrees in their fields.

**GRANTS AND CONTRACTS ACTIVITY: 1989-90**

**SPONSORED PROGRAM EXPENDITURE ACTIVITY: \$17,231,383**

**GRANT PROPOSALS                      REVENUE SOURCES**

737	Submitted	54.3%	Federal
342	Awarded	11.8%	Private
46%	Success Rate	33.9%	State

**PATENTS:** MSU currently holds 15 patents for innovations and processes developed through faculty research; 6 additional patents are pending. MSU also has over 40 licensing agreements with private firms, with more pending. These agreements are the means by which technological advances are transferred from public institutions to the private sector.

**EXAMPLES: GRANTS AND CONTRACTS**

Projects for Native Americans and Other Minorities

\$173,896 - "Special Services for Disadvantaged Students," U.S. Department of Education; supports a program of counseling and other services for financially disadvantaged Native Americans and other minorities.  
 \$1,407,042 - "Minority Access to Research Careers (MARC) Program," U.S. Department of Health and Human Services; supports basic biomedical research that involves undergraduate Native American students at MSU and tribal colleges in an effort to attract them into health professions.  
 \$419,383 - "Native Americans in Adult and Higher Education," U.S. Department of Education; supports Native American graduate students pursuing careers in higher education.

#### Projects of Public Service and Technical Assistance to Montana and the Region

- \$406,000 - "Training for Montana Local Government Officials," W.K. Kellogg Foundation; supports research and training programs to help local government officials better manage their resources.
- \$327,415 - "Television Community Service Grant," Corporation for Public Broadcasting; supports public television programming at MSU (KUSM) for statewide broadcasting of educational programs, documentaries, and national programs of interest to Montanans.
- \$322,000 - "Home Care for Rural Cancer Patients," National Cancer Institute; supports research on home health care needs of cancer patients in Montana.

#### Projects in Agriculture and Material Resources

- \$80,000 - "Value Enhancement of Barley," Wheat/Barley Commission; supports nutritional research on barley varieties developed at MSU.
- \$109,826 - "Trichomonas foetus: Antigen Analysis and Immunizations," U.S. Department of Agriculture; supports studies that will lead to the development of a vaccine against a common parasite of animals.
- \$614,399 - "Surface Chemistry of Naturally and Laboratory Weathered Plagioclase," National Science Foundation; supports an interagency project to study the mechanisms of calcium and sodium particle dissolution and their relation to minerals in streams.

#### Projects in Environmental Studies

- \$151,724 - "In Situ Control of Groundwater Contaminants by Microbiological Processes," U.S. Department of Interior; supports research to develop techniques and products to clean up groundwater and soil contaminated with chemicals.
- \$113,404 - "Streambank Tailings and Revegetation Studies," CH<sub>2</sub>M Hill, Inc.; supports reclamation research on a Superfund site near Butte, Montana.
- \$1,300,000 - "Maximizing Information from Ecological Assessments," Environmental Protection Agency; supports the development of computerized assessment tools which enable regulatory agencies to plan for and forecast environmental impacts.

#### Projects in Materials and Process Science Research

- \$677,200 - "Molecular Beam Epitaxy (MBE) Facility at MSU," National Science Foundation; supports the purchase of instruments enabling scientists to build new materials atom layer by atom layer.
- \$1,680,000 - "Materials Research Grant," National Science Foundation; supports research in MSU's Materials Center designed to develop and study new semiconductor materials useful in manufacturing computer chips.

#### Projects in Molecular Biology and Animal and Human Health

- \$702,343 - "Role of Cytochrome B in Neutrophil Superoxide Production," National Institutes of Health; supports studies of mechanisms used by white blood cells to combat infectious agents.
- \$353,796 - "Mechanisms for Tumor Metastasis," National Institutes of Health/Council for Tobacco Research; supports studies on cell membrane chemicals that enhance the spread of cancer cells.
- \$497,443 - "Interactions of Lipids with Rhodopsin and ROS Proteins," National Institutes of Health; supports studies on chemical compounds involved in vision.

FINANCIAL PROFILE: 1989-90

EXPENDITURES BY PROGRAM

	Expenditures		Percent of Total	
	MSU	Peers <sup>†</sup>	MSU	Peers
Instruction				
Academic Support	\$25,517,141	\$31,889,440	53.9%	48.6%
Student Services	5,636,572	7,641,891	11.9	11.7
Scholarships and Fellowships	4,081,524	3,693,928	8.6	5.6
	<u>1,322,787</u>	<u>1,642,817</u>	<u>2.8</u>	<u>2.5</u>
Subtotal	36,558,024	44,868,076	77.3	68.4
Research				
Public Service	602,547	3,673,050	1.3	5.6
Institutional Support	10,749	1,671,224	0.0	2.6
Physical Plant	4,083,479	6,751,567	8.6	10.3
	6,044,460	8,594,349	12.8	13.1
TOTAL	\$47,299,259	\$65,558,266	100.0%	100.0%

PROFILE PER FTE STUDENT

Expenditures	Dollars-----			Percent of Peers
	MSU	Peers <sup>†</sup>	Diff	
Total				
Instruction Program	\$4,956	\$6,800	\$1,844	68.5%
All Support Programs	2,674	3,329	655	80.3
Library	1,446	1,874	428	77.2
	264	344	80	76.7
Revenue				
State Support				
Tuition	\$3,578	\$5,008	\$1,430	71.4%
Other	1,259	1,177	-82	107.0
	153	615	462	24.9
Revenue Percent of Total Budget				
State Support				
Tuition	72.0%	73.6%	1.6%	
Other	25.3	17.3	-8.0	
	2.7	9.0	6.3	

† Peer figures from 1987 Funding Study Committee Report. Data for University of North Dakota and University of Nevada-Reno are not included.





# **MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY**

**Montana University System**





# MONTANA COLLEGE OF MINERAL SCIENCE & TECHNOLOGY

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	181.76	185.65	183.74	.30	184.04	.30	184.04
Personal Services	6,514,639.50	6,607,941	6,815,754	10,514	6,826,268	10,514	6,826,268
Operating Expenses	2,159,706.24	3,094,663	2,416,068	3,089	2,419,157	2,991	2,415,944
Equipment	252,124.16	45,743	222,860	-4,548	218,312	-4,486	220,219
Debt Service	53,146.80	0	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$8,979,616.70</b>	<b>\$9,748,347</b>	<b>\$9,454,682</b>	<b>\$9,055</b>	<b>\$9,463,737</b>	<b>\$9,019</b>	<b>\$9,462,431</b>
Current Unrestricted Fund	8,979,616.70	9,748,347	9,454,682	9,055	9,463,737	9,019	9,462,431
<b>Total Funding Costs</b>	<b>\$8,979,616.70</b>	<b>\$9,748,347</b>	<b>\$9,454,682</b>	<b>\$9,055</b>	<b>\$9,463,737</b>	<b>\$9,019</b>	<b>\$9,462,431</b>
Instruction	4,471,281.12	4,916,582	4,749,848	0	4,749,848	0	4,749,848
Organized Research	42,579.98	53,094	52,732	0	52,732	0	52,873
Operation & Maint Of Plant	1,530,594.10	1,596,568	1,588,403	62	1,588,465	26	1,582,449
Scholarships & Fellowships	270,428.25	285,255	285,255	0	285,255	0	285,255
Support	2,664,733.25	2,896,848	2,778,444	8,993	2,787,437	8,993	2,792,006
<b>Total Program Costs</b>	<b>\$8,979,616.70</b>	<b>\$9,748,347</b>	<b>\$9,454,682</b>	<b>\$9,055</b>	<b>\$9,463,737</b>	<b>\$9,019</b>	<b>\$9,462,431</b>

## INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	2.00	2.00	2.00	.00	2.00	.00	2.00
Personal Services	84,831.66	79,169	79,991	163	80,154	162	79,937
Operating Expenses	40,182.38	38,103	39,058	3,089	42,147	3,090	42,193
<b>Total Agency Costs</b>	<b>\$125,014.04</b>	<b>\$117,272</b>	<b>\$119,049</b>	<b>\$3,252</b>	<b>\$122,301</b>	<b>\$3,252</b>	<b>\$122,130</b>
General Fund	125,014.04	117,272	119,049	3,252	122,301	3,252	122,130
<b>Total Funding Costs</b>	<b>\$125,014.04</b>	<b>\$117,272</b>	<b>\$119,049</b>	<b>\$3,252</b>	<b>\$122,301</b>	<b>\$3,252</b>	<b>\$122,130</b>

# ORGANIZED RESEARCH

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	.72	.72	.72	.00	.72	.00	.72
Personal Services	33,525.62	34,011	33,368	7,362	33,368	7,362	40,730
Operating Expenses	9,010.91	17,583	17,864	-7,057	18,005	-7,119	10,886
Equipment	43.45	1,500	1,500	-305	1,195	-243	1,257
Total Agency Costs	<u>\$42,579.98</u>	<u>\$53,094</u>	<u>\$52,732</u>	<u>\$0</u>	<u>\$52,732</u>	<u>\$0</u>	<u>\$52,873</u>
Current Unrestricted Fund	42,579.98	53,094	52,732	0	52,732	0	52,873
Total Funding Costs	<u>\$42,579.98</u>	<u>\$53,094</u>	<u>\$52,732</u>	<u>\$0</u>	<u>\$52,732</u>	<u>\$0</u>	<u>\$52,873</u>

# PLANT OPERATION & MAINTENANCE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	----- Base
Full Time Equivalent Employees	31.68	31.68	31.68	.00	31.68	.00	31.68
Personal Services	850,894.30	912,928	910,846	-4,706	906,140	-4,706	906,140
Operating Expenses	660,095.35	662,397	656,314	9,011	665,325	8,975	659,309
Equipment	19,604.45	21,243	21,243	-4,243	17,000	-4,243	17,000
Total Agency Costs	<u>\$1,530,594.10</u>	<u>\$1,596,568</u>	<u>\$1,588,403</u>	<u>\$62</u>	<u>\$1,588,465</u>	<u>\$26</u>	<u>\$1,582,449</u>
Current Unrestricted Fund	1,530,594.10	1,596,568	1,588,403	62	1,588,465	26	1,582,449
Total Funding Costs	<u>\$1,530,594.10</u>	<u>\$1,596,568</u>	<u>\$1,588,403</u>	<u>\$62</u>	<u>\$1,588,465</u>	<u>\$26</u>	<u>\$1,582,449</u>

## SCHOLARSHIP & FELLOWSHIP

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Operating Expenses	270,428.25	285,255	285,255	285,255	285,255	285,255
<b>Total Agency Costs</b>	<b>\$270,428.25</b>	<b>\$285,255</b>	<b>\$285,255</b>	<b>\$0</b>	<b>\$285,255</b>	<b>\$0</b>
Current Unrestricted Fund	270,428.25	285,255	285,255	285,255	285,255	285,255
<b>Total Funding Costs</b>	<b>\$270,428.25</b>	<b>\$285,255</b>	<b>\$285,255</b>	<b>\$0</b>	<b>\$285,255</b>	<b>\$0</b>

## SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	58.25	58.25	59.65	.30	59.95	.30
Personal Services	1,653,900.18	1,623,366	1,723,993	1,731,851	1,723,993	7,858
Operating Expenses	813,480.23	1,273,482	913,716	914,851	916,440	1,135
Equipment	188,311.88	0	140,735	140,735	142,580	0
Debt Service	9,040.96	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$2,664,733.25</b>	<b>\$2,896,848</b>	<b>\$2,778,444</b>	<b>\$8,993</b>	<b>\$2,783,013</b>	<b>\$8,993</b>
Current Unrestricted Fund	2,664,733.25	2,896,848	2,778,444	2,787,437	2,783,013	8,993
<b>Total Funding Costs</b>	<b>\$2,664,733.25</b>	<b>\$2,896,848</b>	<b>\$2,778,444</b>	<b>\$8,993</b>	<b>\$2,783,013</b>	<b>\$8,993</b>

## MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY

### Role and Scope

### NATURE OF THE INSTITUTION

Montana Tech is a specialty institution with its primary mission devoted to

graduate and undergraduate education and research in minerals, energy and the attendant areas of science, technology and economic development. Located within the historic mining community of Butte, the College also provides essential educational service to the local community through a comprehensive array of transfer programs as well as degree offerings in engineering, business development and in the natural and applied sciences. Admission to the College is determined by the universal admissions criteria established by the Montana Board of Regents of Higher Education.



## AREAS OF EMPHASIS

Montana Tech is the only institution of higher learning in North America to offer a fully comprehensive array of degree programs in the areas of minerals, energy, safety and environment. In addition to fundamental research in a wide variety of disciplines, the Montana Tech faculty, along with the professional staff of the Montana Bureau of Mines and Geology (a Department of the College) conducts a rigorous and productive applied research program focused on problem solving in the minerals, energy and materials processing industries. The U.S. Bureau of Mines supports the Montana Mining and Mineral Resources Research Institute on campus while the state has designated the College as Montana's Center for Minerals and Energy Research. As a consequence of a commitment to environmental concerns and a long history of service to the state of Montana and to the nation, the College has been designated as the state's Center of Excellence in Hazardous Substances and Materials Processing by the Montana Science and Technology Alliance. Efficient and timely application of technology to all aspects of the extractive industries is a theme which recurs throughout all academic and research programs at the College.

## AREAS OF CONTINUING DEVELOPMENT

Consistent with the increasing sophistication and technical complexity of the mining and materials processing industries, the College's original mining curriculum has subsequently evolved into separate, specialized curricula designed to prepare students for service in the complex categories of raw materials production, natural resource utilization and materials science. The College offers bachelor's degrees in engineering science as well as degrees in environmental, geological, geophysical, metallurgical, mining and petroleum engineering. Other bachelor's degrees include mathematics, computer science, chemistry, occupational safety and health, and society and technology. Master's degrees in related minerals engineering fields are also available. New programs in key areas of the materials sciences, treatment of hazardous substances, applications of computer engineering and polymer and composite materials are being developed. The College is currently working with the Butte Vocational Technical Center toward development of two-year technology focused programs relating to the industrial environment. The overall quality of the collegiate environment is continuing to develop through an enhanced co-curricular program and an increasingly well integrated array of responsive student services.

## DEGREE LEVELS

Montana Tech offers degrees at the associate, bachelor's and master's degree levels. A joint master's degree in geochemistry has been established with the University of Montana and Montana State University as well as a cooperative master's offering in environmental engineering with Montana State University.

Together, the faculty of the College and the Montana Bureau of Mines and Geology constitute the largest concentration of trained professionals in the earth sciences in the Pacific Northwest.

## CONSTITUENCIES SERVED

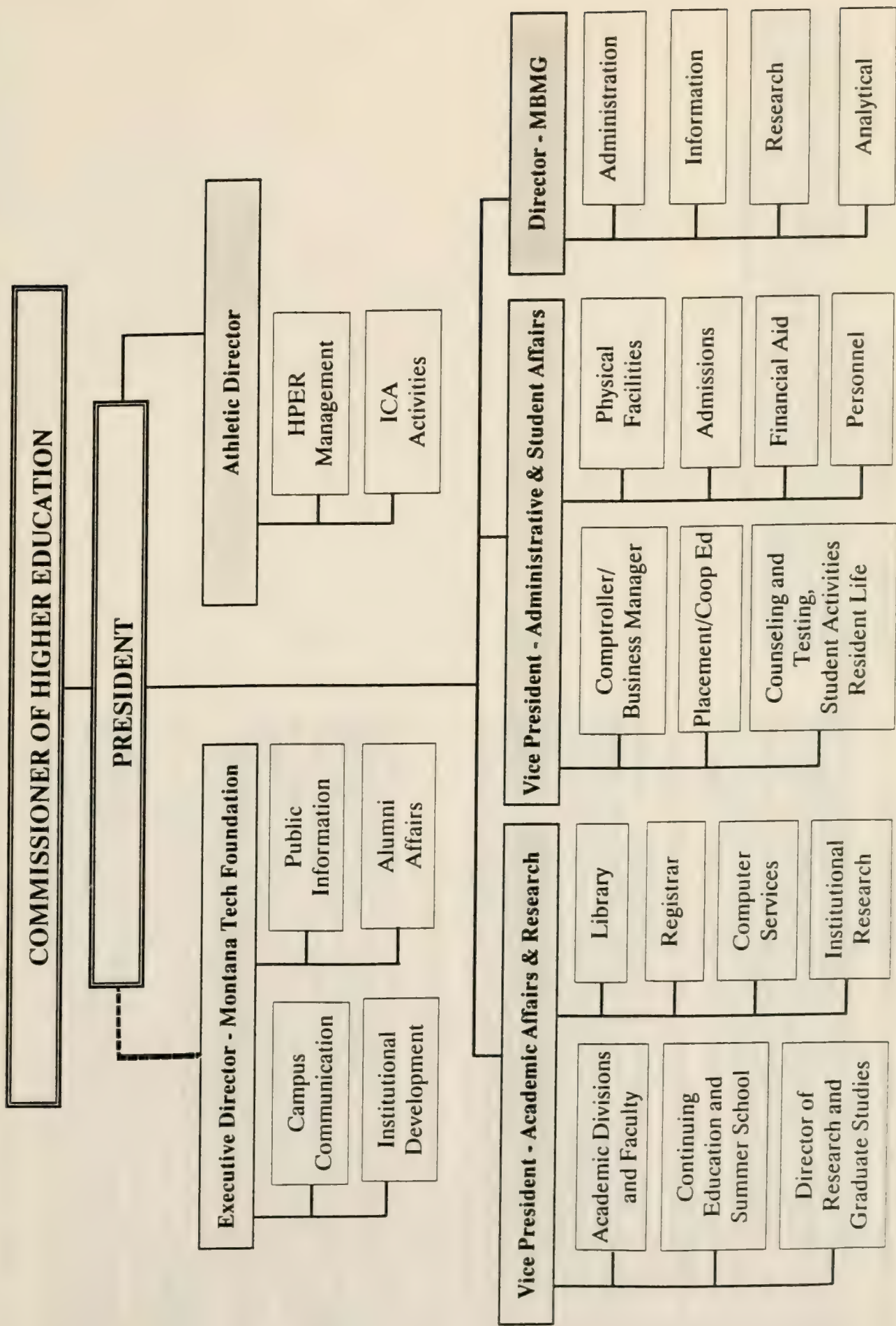
Montana Tech serves local, regional and international constituencies. The student population of the College is derived from throughout the state, the nation and around the world with a corresponding alumni base that has always been international in scope. Traditional industries in the area of mining, minerals and petroleum seek Montana Tech graduates for employment in positions on every continent while forward looking firms in all technology intensive areas increasingly look to Montana Tech for appropriately trained professionals in the information sciences as well as in the engineering and natural sciences. Local businesses have intensified their application of Tech's programs in business and information systems technology for in-house training, thereby reaffirming the College's commitment to serve the local community. Nontraditional students constitute a steadily increasing component of the College's student population, leading to an enhanced program of evening classes and the recent establishment of a day-care center. Montana Tech has established a responsive approach to curriculum development, areas of applied research and community service that is closely linked to local, regional and national economic development. As changing economic circumstances give rise to new constituencies, the College will respond with revised and relevant instructional programs, timely research applications and new commitments to service at all levels.

## AGENCY ORGANIZATION

### **OFFICE OF THE PRESIDENT**

The President is the chief executive officer of the College. (office location: Mining and Geology Building). The following positions report directly to the President: Vice President for Academic Affairs and Research, Vice President for Administrative and Student Affairs, Director of the Montana Bureau of Mines and Geology. The President also supervises the Athletic Director and has a direct working relationship with the Executive Director of the Montana Tech Foundation.

# MONTANA TECH ORGANIZATION CHART





## **VICE PRESIDENT FOR ACADEMIC AFFAIRS AND RESEARCH**

The Vice President for Academic Affairs and Research is the chief academic officer of the College (office location: Mining and Geology Building). The position is responsible for the quality and content of the curriculum and the institution's research activities. The computer center also reports to this Vice President. The following positions report directly to the VP for Academic Affairs and Research: seven academic Division Heads, Director of Research and Graduate School, Director of the Computer Center, Director of Institutional Research, Librarian, Registrar, Continuing Education and Summer School.

## **VICE PRESIDENT FOR ADMINISTRATIVE AND STUDENT AFFAIRS**

The Vice President for Administrative and Student Affairs is the chief fiscal officer and the chief student affairs officer of the College. (office location: Mining and Geology Building) The position is responsible for the programmatic content, process, and quality of student services and Student Affairs co-curricular programs. Also, the position is responsible for the fiscal, budget, and accounting services as well as the physical facilities. The following positions report to the Vice President for Administrative and Student Affairs: Directors of Admissions, Physical Plant, Financial Aid, Personnel and Payroll, Controller and Business Manager, Student Life (including counseling, testing, Learning Center, Residence Hall, Student Union), and Placement/Cooperative Education.

## **MONTANA BUREAU OF MINES AND GEOLOGY**

The Director of the Montana Bureau of Mines and Geology supervises all activities and services of the Bureau. The Director is also the chief geologist for the State. (office location: Main Hall). The Bureau is a division of the College established by the Legislature as a public service and research department. The Bureau is the only earth science agency in Montana State Government and is responsible for assisting in the development of the State's mineral, energy, and ground water resources. Its work comprises field and laboratory study, collection of samples and information, interpretation of data, and compilation of statistics on all mineral resources. Projects are undertaken in cooperation with the USGA, U.S. Bureau of Mines, and other Federal, State, and local agencies.

## **ATHLETICS AND HEALTH, PHYSICAL EDUCATION, AND RECREATION**

The Athletic Director is responsible for the administration of intercollegiate athletics, the management of health, physical education, and recreation facilities and programs. (office location: HPER Building). The following persons report to the Athletic Director: intercollegiate coaches, HPER facility manager.

## **MONTANA TECH FOUNDATION**

The Executive Director of the Montana Tech is responsible for coordinating fund raising and public relations in support of the College. (office location: Foundation House) A small staff of accountants and fund raisers report to the Director. The Executive Director maintains effective working relations with the Foundation Board and with the staff and faculty of the College in the pursuit and management of supplemental funds and scholarships money.



**MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY**  
Butte, Montana

**EXECUTIVE OFFICERS:**

President: Lindsay D. Norman  
Vice President for Academic Affairs and Research: David L. Toppen  
Vice President for Administrative and Student Affairs: John A. Hintz  
**CAMPUS PROFILE: (FY 89-90)**

**ENROLLMENT:**

1,691 Undergraduate (Fall Headcount)  
81 Graduate (Fall Headcount)  
1,772 Total (Fall Headcount)  
1,499 FYFTE

**ENROLLMENT BY FIELD (Fall Headcount):**

234 Computer Science  
94 Society and Technology  
176 Business  
27 Mathematics  
767 Engineering  
147 Physical Sciences (Chem., OSH)  
54 Health Profession  
80 Letters  
269 General Studies  
81 Graduate Studies

**STUDENT PROFILE:**

43% Female  
95% Undergraduate  
88% Montana Residents  
91% Foreign Students  
26% Average Age

**DEGREES AWARDED: (FY 1989-90)**

250 Baccalaureate  
39 Masters

**FTE EMPLOYEES (Unrestricted):**

100.03 Contract Faculty & GTA's  
28.59 Contract Professionals  
63.71 Classified  
12.07 Part-Time & Other  
204.40 Total

**PEER INSTITUTIONS:**

Colorado School of Mines  
New Mexico Institute of Mines  
South Dakota School of Mines and Technology

## ACCREDITATION: 1989-90

Northwest Association of Schools and Colleges

Accrediting Board of Engineering and Technology

Montana College of Mineral Science and Technology

Engineering Science, Environmental, Geological, Geophysical, Metallurgy, Mineral Processing, Mining and Petroleum

American Chemical Society

Chemistry

## STUDENT PERFORMANCE:

This year twenty-eight of Montana Tech's entering students received Montana high school honor scholarships.

Three Montana Tech students were awarded Montana Legislative Internships in the last session, the most for any school in Montana.

Twenty-two percent of Montana Tech entering Fall 1990 freshmen were in the upper ten percent of their high school graduating class. Forty-six percent were in the top twenty-five percent of their high school class and eighty-three percent were in the top half.

Enrolled freshmen at Montana Tech this fall had an average high school grade point average of 3.25.

Montana Tech athletes consistently perform well academically. This past year Montana Tech was represented by twenty-six students who were recognized as ACADEMIC All-Americans, All-Conference, or All-District. In 1987-88, Montana Tech received the Frontier Conference All-Sports Award.

During the 1986-87 academic year, Montana Tech graduates had the highest acceptance rate into the prestigious Navy Nuclear Propulsion Officer Candidate Program.

On percentage, Montana Tech places twice the number of students than any other school in the Student Trainee Program of the Northwest College and University Science Association.

Of the Montana Tech accounting students who participated in the CPA Review classes from 1985 to 1988, approximately fifty-three percent have passed the exam or received a conditional pass.

Over the past 3 years there has been a 100% increase in the number of employers visiting the campus to hire Montana Tech graduates.

Over 250 students are involved in Cooperative Education internships, the highest number in the eleven year history of the program.

TEST SCORES OF 1989 ENTERING FRESHMEN:

-----ACT-----

OVERALL NATIONAL TECH ENG. (82 STUDENTS)	TECH NON-ENG. (144 STUDENTS)	TECH TOTAL (226 STUDENTS)	OVERALL NATIONAL (855,171 STUDENTS)
English	19.1	18.1	18.5
Math	22.7	16.7	17.1
Social Studies	19.9	17.6	17.2
Natural Science	26.1	22.1	21.2
Composite	22.1	18.8	18.6

Source Documents: 1989-90 ACT Class Profile Report  
The High School Profile Normative Data  
High School Class of 1989

EMPLOYMENT STATUS OF 1989 GRADUATES:

Average -----Percent Employed----

Annual Salary	Desired Field	Other Field	Graduate School
Engineering 29,323	77%	1%	16%
Non Engineer. 21,889	57%	17%	14%
Seeking Work	Not Seeking Work	Military	
Engineering 3%	0%	3%	
Non Engineer. 8%	4%	0%	



# FACULTY PUBLICATIONS AND SPONSORED RESEARCH: (FY 89-90)

Topic Area	Publications	Funded *Research Projects
Geology and Geosciences	36	10
Mining and Mineral Processing	42	21
Hydrology Related	20	19
Environmental (Hazards or Engineering)	19	25
Petroleum Engineering	9	3
Math and Humanities	19	7
<b>Total</b>	<b>145</b>	<b>85</b>

\* (Not including maps and internal reports)

## GRANTS AND CONTRACTS ACTIVITY:

Number of Proposals Submitted: 128  
 Success Rate: 66%

### Revenue Sources:

65% Federal  
 23% State  
 12% Private







**EASTERN MONTANA COLLEGE**

**Montana University System**



# EASTERN MONTANA COLLEGE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	312.91	313.72	321.86	.36	322.22	.36	322.22
Personal Services	10,275,719.83	10,056,386	11,045,549	9,273	11,054,822	9,273	11,054,822
Operating Expenses	4,112,164.40	5,042,804	4,080,609	5,399	4,086,008	5,362	4,048,305
Equipment	182,812.93	133,244	256,012	-76,905	179,107	-76,905	185,292
<b>Total Agency Costs</b>	<b>\$14,570,697.16</b>	<b>\$15,232,434</b>	<b>\$15,382,170</b>	<b>\$-62,233</b>	<b>\$15,319,937</b>	<b>\$-62,270</b>	<b>\$15,288,419</b>
Current Unrestricted Fund	14,570,697.16	15,232,434	15,382,170	-62,233	15,319,937	-62,270	15,288,419
<b>Total Funding Costs</b>	<b>\$14,570,697.16</b>	<b>\$15,232,434</b>	<b>\$15,382,170</b>	<b>\$-62,233</b>	<b>\$15,319,937</b>	<b>\$-62,270</b>	<b>\$15,288,419</b>
Instruction	6,911,801.90	7,336,944	7,438,859	0	7,438,859	0	7,438,859
Public Service	255,511.51	269,519	263,231	0	263,231	0	263,870
Operation & Maint Of Plant	2,154,436.00	2,256,727	2,270,757	-76,841	2,193,916	-76,878	2,208,253
Scholarships & Fellowships	344,261.75	358,606	358,606	0	358,606	0	358,606
Support	4,904,686.00	5,010,638	5,050,717	14,608	5,065,325	14,608	5,018,831
<b>Total Program Costs</b>	<b>\$14,570,697.16</b>	<b>\$15,232,434</b>	<b>\$15,382,170</b>	<b>\$-62,233</b>	<b>\$15,319,937</b>	<b>\$-62,270</b>	<b>\$15,288,419</b>

## INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	172.66	173.47	174.79	.00	174.79	.00	174.79
Personal Services	6,303,090.76	6,245,968	6,878,241	0	6,878,241	0	6,878,241
Operating Expenses	565,966.09	1,040,976	516,648	0	516,648	0	516,648
Equipment	42,745.05	50,000	43,970	0	43,970	0	43,970
<b>Total Agency Costs</b>	<b>\$6,911,801.90</b>	<b>\$7,336,944</b>	<b>\$7,438,859</b>	<b>\$0</b>	<b>\$7,438,859</b>	<b>\$0</b>	<b>\$7,438,859</b>
Current Unrestricted Fund	6,911,801.90	7,336,944	7,438,859	0	7,438,859	0	7,438,859
<b>Total Funding Costs</b>	<b>\$6,911,801.90</b>	<b>\$7,336,944</b>	<b>\$7,438,859</b>	<b>\$0</b>	<b>\$7,438,859</b>	<b>\$0</b>	<b>\$7,438,859</b>



## PUBLIC SERVICE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	7.23	7.23	7.23	.00	7.23	.00
Personal Services	202,285.85	199,077	191,600	0	191,600	0
Operating Expenses	53,225.66	70,442	71,631	0	72,270	0
Total Agency Costs	<u>\$255,511.51</u>	<u>\$269,519</u>	<u>\$263,231</u>	<u>\$0</u>	<u>\$263,870</u>	<u>\$0</u>
Current Unrestricted Fund	255,511.51	269,519	263,231	0	263,870	0
Total Funding Costs	<u>\$255,511.51</u>	<u>\$269,519</u>	<u>\$263,231</u>	<u>\$0</u>	<u>\$263,870</u>	<u>\$0</u>

## OPERATION & MAINTENANCE OF PLANT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	27.00	27.00	27.00	.00	27.00	.00
Personal Services	668,622.86	700,156	680,122	0	680,122	0
Operating Expenses	1,479,474.30	1,473,327	1,507,391	64	1,521,765	27
Equipment	6,338.84	83,244	83,244	-76,905	83,244	-76,905
Total Agency Costs	<u>\$2,154,436.00</u>	<u>\$2,256,727</u>	<u>\$2,270,757</u>	<u>\$-76,841</u>	<u>\$2,285,131</u>	<u>\$-76,878</u>
Current Unrestricted Fund	2,154,436.00	2,256,727	2,270,757	-76,841	2,285,131	-76,878
Total Funding Costs	<u>\$2,154,436.00</u>	<u>\$2,256,727</u>	<u>\$2,270,757</u>	<u>\$-76,841</u>	<u>\$2,285,131</u>	<u>\$-76,878</u>

# SCHOLARSHIPS & FELLOWSHIPS

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00
Operating Expenses	344,261.75	358,606	358,606	358,606	358,606	358,606
Total Agency Costs	<u>\$344,261.75</u>	<u>\$358,606</u>	<u>\$358,606</u>	<u>\$358,606</u>	<u>\$358,606</u>	<u>\$358,606</u>
Current Unrestricted Fund	344,261.75	358,606	358,606	358,606	358,606	358,606
Total Funding Costs	<u>\$344,261.75</u>	<u>\$358,606</u>	<u>\$358,606</u>	<u>\$358,606</u>	<u>\$358,606</u>	<u>\$358,606</u>

# SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	106.02	106.02	112.84	.36	113.20	.36
Personal Services	3,101,720.36	2,911,185	3,295,586	3,304,859	3,295,586	3,304,859
Operating Expenses	1,669,236.60	2,099,453	1,626,333	1,631,668	1,573,654	1,578,989
Equipment	133,729.04	0	128,798	128,798	134,983	134,983
Total Agency Costs	<u>\$4,904,686.00</u>	<u>\$5,010,638</u>	<u>\$5,050,717</u>	<u>\$5,065,325</u>	<u>\$5,004,223</u>	<u>\$5,018,831</u>
Current Unrestricted Fund	4,904,686.00	5,010,638	5,050,717	5,065,325	5,004,223	5,018,831
Total Funding Costs	<u>\$4,904,686.00</u>	<u>\$5,010,638</u>	<u>\$5,050,717</u>	<u>\$5,065,325</u>	<u>\$5,004,223</u>	<u>\$5,018,831</u>



# **EASTERN MONTANA COLLEGE**

## **Role and Scope Statement**

### **NATURE OF THE INSTITUTION**

Established March 12, 1927, as Eastern Montana State Normal School, with an initial authorization to prepare teachers for the elementary schools, Eastern Montana College has grown into a comprehensive state college. The college was established in response to the expressed needs of eastern Montana since all of the existing institutions of higher education were located in western Montana.

Dramatic change has followed its founding and Eastern Montana College has grown, with the city of Billings and Yellowstone County, into the major higher education center servicing eastern Montana. The college consists of three academic schools: the School of the Arts and Sciences; the School of Business and Economics; and the School of Education. Eastern's institutional character continues to evolve and the college's geographic location presents many challenges and opportunities for innovation in the development and delivery of new academic programs and services designed to address the needs of its rural/urban geographic service area.

Excellence in instruction along with the promotion of the scholarly pursuits of both faculty and students serve as focal points for the institution. The college is committed to the concept and value of lifelong learning, and the continuing education and community services program provides students and participants with the opportunity to learn the latest developments in their fields and to explore newly emerging areas of interest and development. All faculty members are expected to engage in research or creative activity. In addition, the college participates in a number of ongoing state, regional, and national research projects. The majority of the research is applied and relates directly to the college instructional programs and mission.

Public service is integral to the mission of the college and is conducted in a manner consistent with Eastern's role. The college's two primary public service entities are KEMC Public Radio and the Montana Center for Handicapped Children, a comprehensive education, rehabilitation, and medical/diagnostic center serving Montana's severely and multi-handicapped children and youth.

### **AREAS OF EMPHASIS**

Eastern Montana College has placed primary emphasis on curricular development in the areas of undergraduate and graduate teacher education; a reasonably full complement of undergraduate programs in the liberal arts; and strong undergraduate programs in business and economics. Eastern Montana

College has exclusive responsibility for the undergraduate and graduate degree programs in special education, special education supervision, and rehabilitation and rehabilitation counseling. The undergraduate degree in human services is also a unique program within the system. Eastern's strong commitment to the handicapped is evidenced by the broad base of academic programs and activities sponsored by the Institute for Habilitative Services and the Montana Center for Handicapped Children.

Through the Urban Institute, the Center for Business Enterprise, and the Montana Entrepreneurship Center, a statewide Center for Excellence designated as a cooperative project along with the University of Montana and Montana State University by the Montana Science and Technology Alliance, Eastern endeavors to respond to the call for research, technical assistance, and support from the major industrial groups comprising most of the economic base for Billings, Yellowstone County and eastern Montana. Through existing programs in special education, rehabilitation and rehabilitation counseling, human services, gerontology, recreation therapy, and music and art therapy, Eastern has attempted to respond to dramatically increasing demands for specialized academic programs related to the needs of the medical and allied health professionals servicing the Billings medical community.

### **AREAS OF CONTINUING DEVELOPMENT**

Eastern Montana College will continue to offer a reasonably broad range of quality, undergraduate programs in the arts and sciences. The institution will continue to provide remedial/developmental offerings to those promising students who evidence a need for developmental work. Eastern will continue its strong commitment to the nonacademic support services so essential to quality campus life for students. The Center for Continuing Education and Community Service will continue to provide a wide variety of professional service courses, workshops, seminars, and conferences; undergraduate and graduate continuing education coursework, as necessary to serve the public schools of the region. and in-service training, courses and workshops necessary to support the medical and allied health services industries of Billings, Yellowstone County, and Eastern Montana.

Eastern is also encouraged to develop new academic programs to meet the needs of metropolitan Billings including expanded evening and weekend programming for nontraditional, working and part-time students. Responsiveness to the educational needs of the Billings professional community continues to plan an essential role in Eastern's development. Academic programs necessary to support the business sector, regional economic development, and the medical and health services industries will continue to be explored.



Pending Board of Regents' action on the nature and type of relationship to be developed between Eastern Montana College and the Billings Vocational-Technical Center, Eastern remains prepared to work on a comprehensive curricula proposal designed to meet the post-secondary education needs of the community and region. When appropriate, Eastern will work to establish and maintain inter-institutional relationships with other units of the Montana University System to promote public service and research efforts to help meet the societal, governmental, industrial, and continuing education needs of its urban area. Eastern continues to be very interested in and supportive of the development of an external degree program designed to enhance student access to higher education in Montana.

#### DEGREE LEVELS

Eastern Montana College offers special and pre-professional programs and awards degrees at the associate's bachelor's, and master's degree levels. Eastern also offers several post masters (nondegree) supervisor endorsement programs in Elementary curriculum, Reading K-12, and Special Education K-12. In 1988,

the Board of Regents authorized the offering of the Billings MBA program by the University of Montana.

#### CONSTITUENCIES SERVED BY EASTERN MONTANA COLLEGE

Eastern Montana College serves local, state and regional constituencies. Undergraduate and graduate programs serving a statewide and regional constituency include special education, rehabilitation and rehabilitation counseling, human services and teacher education. Northern Wyoming is a major provider of students and consumer of Eastern graduates in teacher education, rehabilitation, special education, and human services. The college also serves government agencies, educational institutions, industries, businesses and professions through programs of continuing education and community services, research and technical assistance, educational computing, economic development, and entrepreneurship.

## **EASTERN MONTANA COLLEGE**

### **AGENCY ORGANIZATION DESCRIPTION**

#### President's Office:

The President of Eastern Montana College is the Chief Executive Officer for the College. The president is responsible for the administration of the entire college. His goal is to carry out the mission of the college and operate the college as effectively and efficiently as possible in accordance with the regulations established by the Board of Regents and the State of Montana. The academic vice president, administrative vice president, student affairs vice president, news media director and athletics director all report to the president.

#### Academic Vice President's Office:

The academic vice president is responsible for the administration of all academic areas. His goal is to provide quality education to all individuals who attend the college. Areas over which he has direct responsibility include the School of Education, School of Arts and Sciences, School of Business and Economics, Continuing Education and Community Service, Library Services, Graduate Studies and Research, Registrar's Office, institutional Planning, Computer Lab, and Grant Writer's Office.

#### Administrative Vice President's Office:

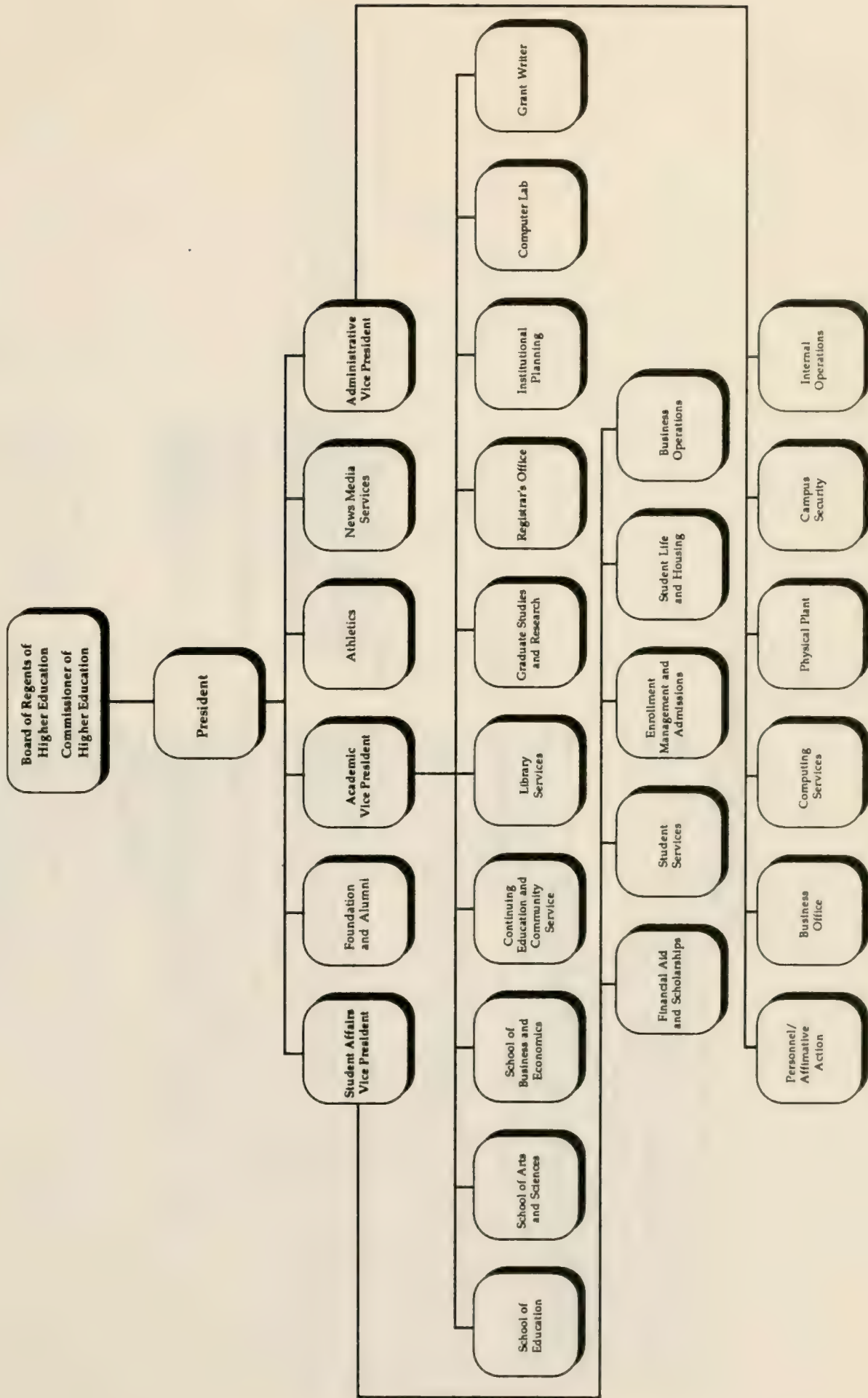
The Administrative Vice President is the Chief Financial Officer for the College. He is responsible for the administration of all financial, computer, and physical plant areas. The goal of the Administrative Vice President is to ensure the administrative areas provide necessary and required services to the students, faculty, staff and community in order for them to efficiently, effectively, and safely fulfill obligations to their constituents in a collegial manner, and within authorized budget authority. His responsibilities include human resources/affirmative action, business office, internal operations, computing services, physical plant and campus security.

#### Student Affairs Vice President's Office:

The Vice President for Student Affairs is responsible for the administration of all student services areas. The goal of the Division of Student Affairs is to help each student deal as effectively as possible with the options provided by Eastern Montana college in academic programs and extracurricular activities and assist the student in finding his or her own place in the college community. Responsibilities include financial aid and scholarships, student services, enrollment management and admissions, student life and housing, and business operations.

# Eastern Montana College

## Administrative Organization





EASTERN MONTANA COLLEGE  
Billings, Montana

EXECUTIVE OFFICERS:

President: Dr. Bruce H. Carpenter  
Academic Vice President: Dr. Ronald P. Sexton  
Administrative Vice President: Mr. Kenneth W. Heikes  
Vice President for Student Affairs: Dr. Edward G. Whipple

CAMPUS PROFILE: 1989-90  
(Fall Headcount)

ENROLLMENT:	ENROLLMENT BY SCHOOL:
3576 Undergraduate	764 Arts & Sciences
479 Graduate	1066 Business & Economics
4055 Total	1355 Education
3360 FYFTE	126 Human Services
3354 FYFTE (Unrestricted)	744 General Studies

STUDENT PROFILE:	DEGREES AWARDED:
63% Female	19 Associate
88.2% Undergraduate	444 Baccalaureate
94.5% Montana Residence	78 Masters
13 Foreign Students	
27.6 Average Age	

## EASTERN MONTANA COLLEGE

FTE EMPLOYEES (Unrestricted):  
166.46 Contract Faculty & GTA's  
39.74 Contract Professionals  
120.95 Classified  
17.82 Part-Time & Other  
344.97 Total  
Eastern Washington University

PEER INSTITUTIONS:  
University of Southern Colorado  
Eastern New Mexico University  
Minot State University  
Southern Oregon State College  
Northern State College

### ACCREDITATION:

Northwest Association of Schools and Colleges  
National Council for the Accreditation of Teacher Education  
National Association of Schools of Music  
National Association of Schools of Art and Design  
Council on Rehabilitation Education

Eastern Montana College  
Education Programs  
Music Program  
Art Program  
Habilitative Services

### STUDENT ACHIEVEMENTS:

In May 1989, 64% of the Eastern Montana College Accounting students passed or conditioned on the national CPA exam. Eastern Montana College was ranked as one of the top ten institutions (without graduate programs) in the nation for passing rates on the national CPA exam.

Fall 1989, twenty-one entering freshmen received Presidential Scholarships. The recipients must be Montana residents and among the top 10% of their high school class, or have at least a 3.5 cumulative grade point average; and at least a 23 composite score on the ACT or equivalent SAT score.

Three American Indian students were awarded the A.T. Anderson Scholarship Fall 1989. The scholarships are awarded annually to American Indian science and engineering students who are at least 1/4 American Indian, are an American Indian Science and Engineering Society member and who demonstrate the ideals and goals of the Society.

The Teacher Education programs at EMC continues to draw students at the undergraduate and graduate levels. Enrollments remain steady with 1355 majors in Fall quarter 1989. The EMC Education graduates continue to remain in demand by the school districts in Montana and other states. Of the 1989 Education graduates, 73% were placed in their field.

June 1990, three students were honored for their work in research as graduate students. EMC undergraduate students presented papers at the Montana Arts and Sciences Conference hosted on the EMC campus in April 1990. The participants papers will be published and placed in the Library of Congress as well as the EMC Library.

# TEST SCORES OF 1989 ENTERING FRESHMEN:

	-----ACT-----		-----SAT-----	
	EMC	USA*	EMC	USA
English	18.3	19.0	Verbal	441
Math	16.1	17.8	Math	476
Composite	18.3	19.3		

\* Note: '88-89 National Average for college enrolled freshmen.

## EMPLOYMENT STATUS OF GRADUATES:

	Average FT Annual Salary	Desired Field	Other Field	Graduate School	Percent Employed Seeking Work	Not Seek Employment
Associate:	\$16,221	34%	38%	28%	0%	0%
Baccalaureate: (Total)	17,696	65%	21%	6%	5%	3%
Arts and Sciences	15,304	27%	34%	25%	7%	6%
Education	18,007	77%	14%	3%	3%	3%
Business and Econ.	18,607	65%	25%	2%	7%	1%
Human Services	14,530	69%	14%	3%	3%	10%



## FACULTY ACTIVITY AND ACCOMPLISHMENTS:

During the past four academic years, seven faculty members from Eastern Montana College have received Fulbright Faculty Grants for Lecturing and Research Abroad through the Council for International Exchange of Scholars. Fulbright Research Grants were awarded for Foreign Languages to Belize; Art to Spain; Philosophy, Humanities and Religious Studies to India; Accounting and Information Systems to Japan and Korea; Sociology and Political Science to Thailand; and Lecturing grants for English language and American Literature to Czechoslovakia and Yemen.

An Associate Professor of Biology, is internationally known for his scientific studies and research in animal population control.

Two EMC professors are co-directors of the Eastern Montana College Poll of National, State, and Local Issues. Students enrolled in Political Science or Sociology classes were responsible for carrying out the survey research project. The poll surveys Montana voters concerning current issues of the State and nation. The results are published and reflect the attitudes of the adult Montanans.

Percent of Faculty with Terminal Degrees: 84.4%

## GRANT AND CONTRACTS ACTIVITY:

Number of proposals submitted: 49

Success Rate: 30.6%

### Revenue Sources:

Federal	83.6%
State	6.7
Local	1.9
Private	7.8

EMC Expenditures: \$3,664,692

# FINANCIAL PROFILE: EASTERN MONTANA COLLEGE FISCAL YEAR 1990 DATA

PEER FISCAL YEAR 1987 DATA

## EXPENDITURES BY PROGRAM:

	<u>Expenditures</u>		<u>EMC % Of</u>		<u>Percent of Total</u>	
	<u>EMC</u>	<u>PEERS</u>	<u>PEERS</u>		<u>EMC</u>	<u>PEERS</u>
Instruction	\$6,327,502	\$9,434,948	67.06%		46.27%	50.72%
Academic Support	1,639,337	1,908,746	85.89%		11.98%	10.26%
Student Services	1,707,406	1,382,096	123.54%		12.48%	7.43%
Scholarships & Fellowships	335,766	33,181	1,011.92%		2.46%	0.18%
	10,010,011	12,758,971	78.45%		73.19%	68.59%
Research	0	123,662	0.00%		0.00%	0.66%
Public Service	233,335	253,056	92.21%		1.71%	1.36%
Institutional Support	1,406,212	2,702,568	52.03%		10.28%	14.53%
Physical Plant	2,023,824	2,764,583	73.21%		14.80%	14.86%
Transfers	3,115	0	0.00%		0.02%	0.00%
TOTAL	\$13,676,497	\$18,602,840	73.50%		100.0%	100.0%

## PROFILE PER FTE STUDENT:

Expenditures:	<u>EMC</u>	<u>PEERS</u>	<u>DIFFERENCE</u>	<u>Percent of Peers</u>
Total	\$4,161	\$4,903	\$742	84.87%
Instruction Program	1,925	2,466	541	78.06%
All Support Programs	1,446	1,648	202	87.74%
Library	193	251	58	76.89%
Revenue:				
State Support	3,086	3,352	266	92.06%
Tuition	1,019	1,488	469	68.48%
Other	28	--	(28)	0.00%
Revenue % of Total Budget:				
State Support	74.7%	68.4%	-6.3%	109.21%
Tuition	24.7%	30.3%	5.6%	81.52%
Other	0.6%	--	-0.6%	0.00%

FORMULA ELEMENTS: EASTERN MONTANA COLLEGE FISCAL YEAR 1990 DATA  
PEERS FISCAL YEAR 1987 DATA

Instruction:	EMC	PEERS	DIF	Percent of Peers
Student/Faculty Ratio	18.75	19.2	0.45	97.66%
Average Faculty Salary	**\$26,059	\$29,400	\$3,341	88.64%
Faculty Salary Benefits	20.86%	23.30%	2.4%	89.53%
Instructional Support/FTE	**\$386	\$405	\$19	95.31%
Support:				
Support/FTE (ext Library)	\$1,098	\$1,648	\$550	66.63%
Library Expenditures	\$634,925	\$1,045,750	\$410,825	60.71%
Physical Plant	\$2,084,794	\$2,764,583	\$679,789	75.41%
Scholarships/Fellowships	\$353,099	\$66,361	(\$286,738)	532.09

\*This represents the 94% funding level.

FUNDING SUMMARY:

	1988-89 Actual	1989-90 Actual	1990-91 Estimated
General Fund	\$8,464,391	\$9,063,468	\$9,704,171
Millage	1,677,780	1,651,294	1,647,457
Tuition and Fees	3,258,303	3,892,159	3,817,487
Other	92,474	86,881	37,000
Total	\$13,492,948	\$14,693,802	\$15,206,115











**NORTHERN MONTANA COLLEGE**

**Montana University System**



## 1

[illegible]

# INSTRUCTION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	105.57	105.23	100.97	.00	100.97	100.97
Personal Services	3,751,720.13	3,687,626	3,713,197	0	3,713,197	3,713,197
Operating Expenses	456,349.76	547,850	312,218	0	312,218	312,218
Equipment	37,544.20	23,000	65,729	0	65,729	65,729
<b>Total Agency Costs</b>	<b>\$4,245,614.09</b>	<b>\$4,258,476</b>	<b>\$4,091,144</b>	<b>\$0</b>	<b>\$4,091,144</b>	<b>\$4,091,144</b>
Current Unrestricted Fund	4,245,614.09	4,258,476	4,091,144	0	4,091,144	4,091,144
<b>Total Funding Costs</b>	<b>\$4,245,614.09</b>	<b>\$4,258,476</b>	<b>\$4,091,144</b>	<b>\$0</b>	<b>\$4,091,144</b>	<b>\$4,091,144</b>



# PUBLIC SERVICE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00	.00
Personal Services	15.81	0	0	0	0	0	0
Operating Expenses	(0.00)	8,891	8,891	8,891	8,891	8,891	8,891
<b>Total Agency Costs</b>	<b>\$15.81</b>	<b>\$8,891</b>	<b>\$8,891</b>	<b>\$0</b>	<b>\$8,891</b>	<b>\$0</b>	<b>\$8,891</b>
Current Unrestricted Fund	15.81	8,891	8,891	0	8,891	0	8,891
<b>Total Funding Costs</b>	<b>\$15.81</b>	<b>\$8,891</b>	<b>\$8,891</b>	<b>\$0</b>	<b>\$8,891</b>	<b>\$0</b>	<b>\$8,891</b>

# OPERATION & MAINTENANCE OF PLANT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Deer Recommended	----- Base	Fiscal 1993 Incr/Deer Recommended	----- Base
Full Time Equivalent Employees	20.75	20.75	20.75	.00	20.75	.00	20.75
Personal Services	456,335.52	524,626	523,477	0	523,477	0	523,477
Operating Expenses	741,247.66	652,899	648,611	34,000	645,136	33,611	678,747
Equipment	7,326.92	21,031	21,031	0	21,031	0	21,031
<b>Total Agency Costs</b>	<b>\$1,204,910.10</b>	<b>\$1,198,556</b>	<b>\$1,193,119</b>	<b>\$34,000</b>	<b>\$1,189,644</b>	<b>\$33,611</b>	<b>\$1,223,255</b>
Current Unrestricted Fund	1,204,910.10	1,198,556	1,193,119	34,000	1,189,644	33,611	1,223,255
<b>Total Funding Costs</b>	<b>\$1,204,910.10</b>	<b>\$1,198,556</b>	<b>\$1,193,119</b>	<b>\$34,000</b>	<b>\$1,189,644</b>	<b>\$33,611</b>	<b>\$1,223,255</b>

# SCHOLARSHIPS & FELLOWSHIPS

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	-----
Full Time Equivalent Employees	.00	.00	.00	.00	.00	.00	.00
Operating Expenses	297,398.80	314,000	314,000	0	314,000	0	314,000
<b>Total Agency Costs</b>	<b>\$297,398.80</b>	<b>\$314,000</b>	<b>\$314,000</b>	<b>\$0</b>	<b>\$314,000</b>	<b>\$0</b>	<b>\$314,000</b>
Current Unrestricted Fund	297,398.80	314,000	314,000	0	314,000	0	314,000
<b>Total Funding Costs</b>	<b>\$297,398.80</b>	<b>\$314,000</b>	<b>\$314,000</b>	<b>\$0</b>	<b>\$314,000</b>	<b>\$0</b>	<b>\$314,000</b>

# SUPPORT

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	----- Base	Fiscal 1992 Incr/Decr Recommended	----- Base	Fiscal 1993 Incr/Decr Recommended	-----
Full Time Equivalent Employees	58.05	58.05	58.05	.31	58.36	.31	58.36
Personal Services	1,700,239.30	1,555,847	1,519,164	1,527,079	1,519,164	7,915	1,527,079
Operating Expenses	854,653.11	892,518	786,112	787,247	795,486	1,135	796,621
Equipment	83,564.79	0	77,618	77,618	79,199	0	79,199
<b>Total Agency Costs</b>	<b>\$2,638,457.20</b>	<b>\$2,448,365</b>	<b>\$2,382,894</b>	<b>\$2,391,944</b>	<b>\$2,393,849</b>	<b>\$9,050</b>	<b>\$2,402,899</b>
Current Unrestricted Fund	2,638,457.20	2,448,365	2,382,894	2,391,944	2,393,849	9,050	2,402,899
<b>Total Funding Costs</b>	<b>\$2,638,457.20</b>	<b>\$2,448,365</b>	<b>\$2,382,894</b>	<b>\$2,391,944</b>	<b>\$2,393,849</b>	<b>\$9,050</b>	<b>\$2,402,899</b>

## ROLE AND SCOPE STATEMENT

### Nature of the Institution

Northern Montana College, located in Havre, serves residents living in a 32,000 square mile area of north central Montana. The institution, established by the Thirteenth Legislative Session, began instruction on September 24, 1929.

Northern Montana College provides quality undergraduate education leading to associate and baccalaureate degrees. Graduate education is offered at the master's level in primary and secondary education, and in guidance and counseling.

Public service to Montana citizens is a priority activity at Northern Montana College as it addresses the needs of the population through linkages with business, military, and industrial organizations. Northern Montana College provides economic development initiatives to Montana including applied research and technology transfer.

### Areas of Emphasis

The unique programmatic emphasis at Northern Montana College is middle technology. Middle technology is the application of high technology, product innovation, and engineering to the productivity and economic development of society, expediting the transfer of technology to business, military, environmental, and industrial enterprises through computerization and automation. Mathematics, sciences, and communication skills are the foundation of middle technology, which also requires an understanding of the liberal arts and sciences, and mastery of the artisan's craft.

Programs in middle technology at Northern Montana College encompass a wide realm. Some programs emphasize traditional vocational education by concentrating on skills and craftsmanship. These programs are buttressed by basic communication and computational skills. Presently Northern Montana College maintains its statewide mission in vocational teacher preparation through the center for Vocational Education Research, Curriculum and Personnel Development. Other middle technology programs feature the industrial technology universe. These programs offered primarily at the associate degree level, insure that Montanians become proficient in the operations, management and servicing of technologically complex systems found in the growth sector of Montana's economy. Finally, several middle technology baccalaureate programs draw heavily upon higher level mathematics and sciences to educate technologists for the post-industrial economy.

The baccalaureate nursing program at Northern Montana College articulates nursing competencies so that diploma, certificate, or associate degree graduates can attain high quality baccalaureate education without course repetition. Both the associate and baccalaureate nursing programs continue to develop curriculum and clinical experiences to reflect current health care technology with consideration to the special needs of rural regions in Montana. Both programs pursue accreditation by the National League of Nursing.

The multi-entry/multi-exit mode of access to higher education recognizes that many Montana citizens, for various reasons, interrupt their educational careers. In many cases, these students should receive the appropriate credential to reflect their achievement and to expedite their re-entry into post-secondary education. Northern Montana College designs its academic programs so that no citizen will be required to repeat courses to certify knowledge, understanding or skill already mastered within another educational context.

### Areas of Continuing Development

Northern Montana College emphasizes an interdisciplinary approach to liberal studies providing students with the traditional breadth of disciplines within the arts and sciences as well as selected concentrations within those disciplines.

The Northern Montana College Program in business emphasizes small business development employing a quantitative focus and is characterized by the multi-entry/multi-exit pattern of enrollment. Cooperative educational experiences continue to be strong components of business and other academic programs. Teacher education programs at Northern Montana College focus on K-12 educational needs within the north central region of the state, especially in the area along the northern border known as the Hi-Line.

Northern Montana College shares many characteristics with other Montana University System institutions providing basic collegiate instruction required for career preparation and the development of human potential—a requisite role of any institution of higher education. Northern Montana College, a teaching and learning institution, is committed to meeting the continuing education and manpower needs of Montana's changing economy. Scholarly activity, applied research, and public service are undertaken at Northern Montana College to lend vitality to teaching, the growth of a community of scholars, and the economic and social development of the state. Northern Montana College considers its primary role to be a human potential development center for Montana citizens.



To accomplish these various goals, Northern Montana College has established state-of-the-art computer and automation laboratories, automotive and diesel technology work facilities, a designated governmental documents depository is located in the Vande Bogart Library which is accessible to the citizens of the region, and national public radio programming is broadcast from the campus radio station under the call letters KNMC. Partnerships and agreements have been developed with a variety of health care agencies to provide clinical experience for associate and baccalaureate nursing students. Education majors, in addition to the student teaching experience, participate in a variety of field experiences in the public schools designed to enhance their classroom learning.

### **Degree Levels**

Northern Montana College offers degrees at the associate, bachelor's and master's levels appropriate to its mission.

### **Constituencies Served**

Northern Montana College serves local, state, and international constituencies. These constituencies include students with traditional educational goals, students seeking specific knowledge or skills for personal or employment purposes, and graduate students seeking master's degrees. In addition, Northern Montana College provides service to local and state businesses, government agencies, non-profit organizations, and individuals. The residents of the Hi-Line have come to expect an array of cultural and entertainment events hosted or produced by Northern Montana College.

NORTHERN MONTANA COLLEGE

Executive Officers:

President: William Daehling  
Vice President for Academic Affairs (Acting): Martha Ann Dow  
Dean of Student Affairs: Gregory Hauser  
Director of Development: Thomas Reynolds  
Director of Fiscal Affairs: William Byars

Campus profile 1989-90

Enrollment: Fall 1989

1,489 Undergraduate  
269 Graduate  
1,758 Total (Headcount)  
1,581 AY FTE

Student Profile:

51% Female  
49% Male  
97% Montana Residents  
29 Average Age

FTE Employees (Unrestricted):

84.2 Contract Faculty  
25.7 Contract Professional  
60.5 Classified  
18.5 Part-time and Other  
188.9 Total

Declared Majors by Field: (1989 Fall Headcount):

554 Education  
389 Technology  
308 Business  
216 Nursing  
291 General and Undecided

Degrees Awarded (1989-90):

157 Associated  
150 Baccalaureate  
75 Masters

Peer Institutions:

Adams State College, CO  
Lewis-Clark State, ID  
Oregon Institute of Technology  
Western New Mexico University

Enrollment Status of 1988 NMC Graduates:

Average Annual Salary: \$18,463  
Total Percent Placed: 96%  
Major Field: 72%  
Other Field: 4%  
Continuing Education: 18%  
Not Seeking Work: 2%

Percent of Faculty with Terminal Degrees: 34%

## Faculty Student Accomplishments:

### Accreditation:

Northwest Association of Schools and Colleges  
Office of Public Instruction - Teacher Education Programs

### Accomplishments:

- \*Three first place state VICA contest winners
- \*One third place National VICA contest winner
- \*Development of a tractor resource center for assisting farmers and implement dealers
- \*Development of a training program for water and wastewater in partnership with the State Water Quality Bureau
- \*Recognized training site for AutoCad and AutoDest
- \*Recognized training site for General Motors
- \*Development of a Cooperative Education job site with Fairbanks-Morse in Norfolk Virginia which provides groups of students with the opportunity to repair diesel engines on large ships.
- \*Establishment of electronic bulletin boards for agriculture, water quality training, national environmental training centers
- \*Test site for the Association of Professional Computer Certification
- \*Over 95% of Nursing graduates pass the State Board of Nursing Exam
- \*Over 95% of Education graduates pass the National Teachers Exam

### Publication:

IBM Microcomputers, A programmers Book, McGraw Hill (1990), Sanchez, Julio and Canton, Maria P.

### Grants and Contract Activity FY89-90:

Department of Education Carl D. Perkins

VICA Leadership (\$10,000): to make school administrators and instructors more aware of the activities of VICA

Montana Center for Vocational Education (\$155,000): Research Curriculum and Personnel Development: Identify, summarize and publish the vocational technical offerings provided by the postsecondary schools in Montana. Also conduct state and national searches for training materials, lists of competencies identified for vocational programs, and similar types of programs designed for articulation among programs in vocational technical education. Conduct

NORTHERN MONTANA COLLEGE

curriculum development seminars to assist the participating schools in updating their curriculum and to develop or adapt curriculum for programs in the state;

Native American Peer Counseling (\$43,043): This grant is designed for the development of an holistic guidance and counseling system, for first time Vocational-Technical freshmen Native American students at Northern Montana College. Its purpose is to sharply reduce the current attrition rate particularly between Fall and Winter Quarter enrollment.

U.S. Depart of Education Title IV - Student Services (\$111,715): This is the continuation of a three year grant for the purpose of providing support serves to identified minorities. These include tutoring, career guidance and counseling

EPA Operating Management Evaluation (\$40,000): The purpose of this grant is to continue to conduct OME's in Montana utilizing the comprehensive performance evaluation/composite correction approach, developed by Process Applications, Inc of Fort Collins Colorado for improved wastewater treatment at small federally funded wastewater treatment facilities.

Montana Environmental Training Center (\$150,000): The purpose of this grant is to establish a center for training and support of municipal water plant operators.

Burlington Northern Foundation (\$25,000) A grant for the purpose of purchasing biology lab equipment.

Murdock Charitable Trust (\$40,000): A grant for the purpose of purchasing electronics lab equipment.

Bank of Montana (\$6,900), U.S. West (\$2,000) and Carl Perkins (\$2,000): These three grants are for the purpose of establishing a women's center on campus. The women's center would deal with the transition of non-traditional age women into the college environment.











# MONTANA UNIVERSITY SYSTEM

Montana Agricultural Experiment Station

Montana Cooperative Extension Service

Montana Forest and Conservation  
Experiment Station

Bureau of Mines and Geology



## 1

[illegible]

### AGENCY DESCRIPTION

The Montana Agricultural Experiment Station (MAES) was established at Montana State University by the Montana Legislature under Hatch Act authorization provided by the United States Congress in 1887. Its mission, as established by state statute, is to conduct research relating to the people of Montana. The MAES is the agricultural research component of the land-grant university's tri-partite mission of teaching, research, and service.

The goal of the MAES is to enhance the social and economic well-being of the state, national, and international communities through research programs addressing problems facing crop and livestock producers and consumers of agricultural products. Research is conducted to improve the competitive position of Montana farmers and ranchers; to ensure the safety, wholesomeness and cost-effectiveness of agricultural production principles and techniques applicable to semi-arid and intermountain regions throughout the world.



# ORGANIZED RESEARCH PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incr/Decr Recommended	Base	Incr/Decr Recommended
Full Time Equivalent Employees	243.00	242.00	243.00	.00	243.00	.00
Personal Services	7,171,687.00	7,545,254	7,548,180	0	7,548,180	0
Operating Expenses	1,468,588.59	1,468,591	1,486,031	5,555	1,468,887	3,958
Equipment	125,694.00	126,000	126,000	0	126,000	0
Debt Service	306.00	0	0	0	0	0
Total Agency Costs	<u>\$8,766,275.59</u>	<u>\$9,139,845</u>	<u>\$9,160,211</u>	<u>\$5,555</u>	<u>\$9,143,067</u>	<u>\$3,958</u>
Current Unrestricted Fund	8,766,275.59	9,139,845	9,160,211	5,555	9,143,067	3,958
Total Funding Costs	<u>\$8,766,275.59</u>	<u>\$9,139,845</u>	<u>\$9,160,211</u>	<u>\$5,555</u>	<u>\$9,143,067</u>	<u>\$3,958</u>

## RESEARCH PROGRAM DESCRIPTION

The MAES research program includes 14 academic departments, service divisions and laboratories located at Bozeman and 7 agricultural research centers located around the state. In addition, the Fort Keogh Livestock and Range research station at Miles City is a cooperative program between the MAES and USDA/ARS. considerable research activity is also conducted on the land and using the facilities of private Montana farmers and ranchers.

Research projects relating to agricultural activities and other uses of natural resources are undertaken to enhance knowledge of the social, environmental, and economic impacts of agricultural production activities and policies; to ale research findings relevant and useful in their applications to the problems and choices facing the state; and to disseminate research findings in an understandable manner to other scientists and private citizens.

## Spring Wheat Breeding Program

The Spring Wheat Breeding Program is included in the Research Program. Its mission if to improve production and performance and increase market value through quality properties of this major small grains crop in the state. The goals and objectives of the spring wheat breeding program are to:

1. Improve quality through increased protein quality and quantity levels in Montana spring wheat varieties.
2. Improve insect resistance with special reference to the wheat stem sawfly and the Russian grain aphid.

3. Increase disease resistance with special reference to soil-borne and air-borne pathogens.
4. improve production capabilities under dryland systems with special reference to high levels of moisture stress.

The accomplishment of each objective will involve the extensive use of traditional and recently developed plant breeding approaches and techniques. Genetic variability will be obtained from materials contained in world collections and through biotechnology and genetic engineering. Progress will be measured by extensive laboratory and field testing over many years. The expected project duration will be indefinite since plant breeding programs required at least ten years from the time of an initial cross to the production of a new variety. In addition, quality and production demands change with the advent of new insect and disease problems and marketing demands.

# US RANGE STATION PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Decr Recommended	Base	Incrr/Decr Recommended
Full Time Equivalent Employees	16.67	16.67	16.67	.00	16.67	.00
Personal Services	354,282.89	375,784	375,784	0	375,784	0
Operating Expenses	3,819.81	10,611	10,591	0	10,542	0
Equipment	1,900.00	3,000	3,000	15,000	3,000	0
Total Agency Costs	<u>\$360,002.70</u>	<u>\$389,395</u>	<u>\$389,375</u>	<u>\$15,000</u>	<u>\$389,326</u>	<u>\$0</u>
Current Unrestricted Fund	360,002.70	389,395	389,375	15,000	389,326	0
Total Funding Costs	<u>\$360,002.70</u>	<u>\$389,395</u>	<u>\$389,375</u>	<u>\$15,000</u>	<u>\$389,326</u>	<u>\$0</u>

## US Range Station Program Description

The USDA-ARS Fort Keogh Livestock and Range Research Laboratory at Miles City is a cooperative program of the United States Department of Agriculture and the state through the Montana Agricultural Experiment Station. The purpose of the laboratory is to improve efficiency of livestock production from rangeland resources in the Northern Great Plains. The research program emphasizes finding solutions to immediate and anticipated problems of farmers and ranchers in the region and throughout the nation. Today, a combination of high-technology and adaptive interdisciplinary approaches are used to study range development, improvement and management, range forage nutrition, and growth, reproduction and genetics of beef cattle. Success in fulfilling this mission helps ensure a continued nutritious and economical supply of beef, as well as continued viability of the beef production industry in the Northern Great Plains.





# MONTANA COOPERATIVE EXTENSION SERVICE

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	115.77	115.77	115.77	.00	115.77	.00	115.77
Personal Services	3,744,821.02	3,988,347	3,988,347	0	3,988,347	0	3,988,347
Operating Expenses	513,624.83	530,019	533,827	-15,000	518,827	-14,473	507,715
Equipment	16,655.12	20,000	20,000	0	20,000	0	20,000
Debt Service	3,344.88	0	0	0	0	0	0
Total Agency Costs	<u>\$4,278,445.85</u>	<u>\$4,538,366</u>	<u>\$4,542,174</u>	<u>\$-15,000</u>	<u>\$4,527,174</u>	<u>\$-14,473</u>	<u>\$4,516,062</u>
Current Unrestricted Fund	4,278,445.85	4,538,366	4,542,174	-15,000	4,527,174	-14,473	4,516,062
Total Funding Costs	<u>\$4,278,445.85</u>	<u>\$4,538,366</u>	<u>\$4,542,174</u>	<u>\$-15,000</u>	<u>\$4,527,174</u>	<u>\$-14,473</u>	<u>\$4,516,062</u>
Public Service	4,278,445.85	4,538,366	4,542,174	-15,000	4,527,174	-14,473	4,516,062
Total Program Costs	<u>\$4,278,445.85</u>	<u>\$4,538,366</u>	<u>\$4,542,174</u>	<u>\$-15,000</u>	<u>\$4,527,174</u>	<u>\$-14,473</u>	<u>\$4,516,062</u>

## AGENCY DESCRIPTION

The Montana Cooperative Extension Service was established as a result of the Smith-Lever Act of 1914. The extension service is an educational resource dedicated to improving the quality of people's lives by providing research-based knowledge to strengthen the social, economic, and environmental well-being of families, communities, and agricultural enterprises.

The objectives of the extension service are to:

- 1) Provide research-based information and technological developments, and educate agricultural producers, resource managers, agribusiness managers, financial lenders and others in interpretation and use of this information to achieve competitiveness in and profitability from production and efficiently-provided goods and services for the consuming public.
- 2) Educate individuals and families in the interpretation and use of information so they can improve their quality of life through increased economic and social stability, improved nutrition and health levels, and improved management skills.

3. Teach youth life skills through learn-by-doing projects and activities that will enable them to establish life goals and become productive citizens.
4. Educate people in processes useful in arriving at public decisions that will enhance community economic and social well-being.

The Montana Cooperative Extension Service serves 53 of the 56 counties through 49 county extension offices. It has four area offices with the main operations housed in Bozeman at Montana State University. In meeting the above objectives, education programs provided by extension service faculty are derived from many different sources. background materials for educational efforts are developed by the extension service, the Montana Agricultural Experiment Station, and other Montana State University faculty, from research information available through faculty from other public universities and private colleges and universities, from information provided by researchers and other state and federal agency personnel, and from researchers in the private sector.

## BASE FUNDING

The Montana Cooperative Extension Services has two sources of funding. Federal Smith Lever funds account for approximately 43% of the base budget. The remainder is general fund.

## DECREASES FROM BASE BUDGET

The FY91 authorized budget includes \$15,000 state special revenue for fees the extension service is permitted to charge for conducting groundwater protection workshops as provided in HB757. The extension service has not collected any fees. Therefore the \$15,000 state special revenue has not been included in the executive budget recommendation for the 1993 biennium. The FY93 base and the recommended budget reflect a decrease of \$10,546 due to removal of funding for a ten-year telephone lease agreement which terminates in FY92.

# MONTANTA FOREST AND CONSERVATION EXPERIMENT STATION

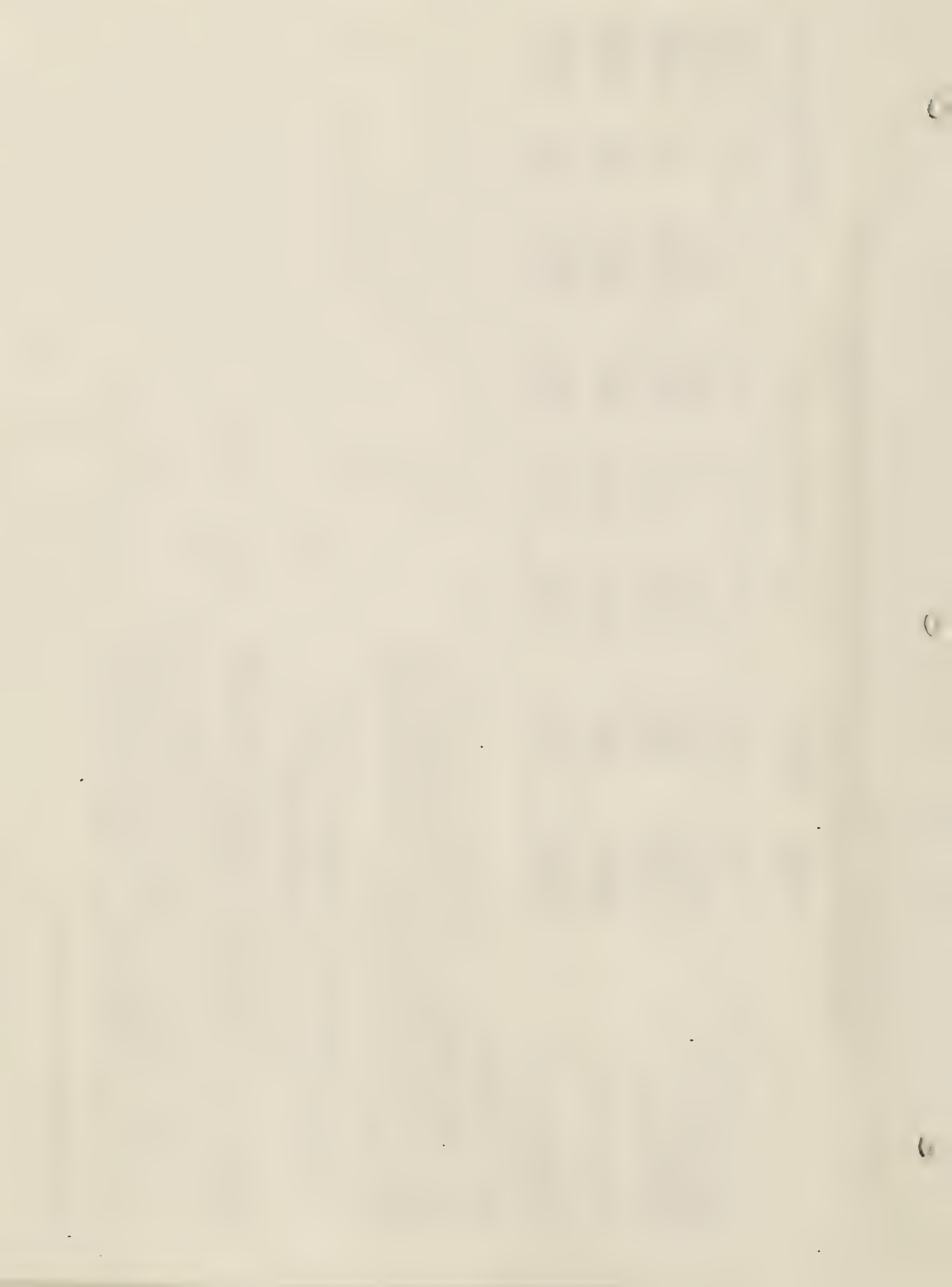
	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	16.09	16.09	16.09	.00	16.09	.00	16.09
Personal Services	507,491.11	547,721	547,721	0	547,721	0	547,721
Operating Expenses	137,060.44	127,184	128,584	359	128,943	151	129,347
Equipment	3,750.00	13,000	13,000	0	13,000	0	13,000
Total Agency Costs	<u>\$648,301.55</u>	<u>\$687,905</u>	<u>\$689,305</u>	<u>\$359</u>	<u>\$689,664</u>	<u>\$151</u>	<u>\$690,068</u>
Current Unrestricted Fund	648,301.55	687,905	689,305	359	689,664	151	690,068
Total Funding Costs	<u>\$648,301.55</u>	<u>\$687,905</u>	<u>\$689,305</u>	<u>\$359</u>	<u>\$689,664</u>	<u>\$151</u>	<u>\$690,068</u>
Research	648,301.55	687,905	689,305	359	689,664	151	690,068
Total Program Costs	<u>\$648,301.55</u>	<u>\$687,905</u>	<u>\$689,305</u>	<u>\$359</u>	<u>\$689,664</u>	<u>\$151</u>	<u>\$690,068</u>

## AGENCY DESCRIPTION

In 1937, during the Depression, the legislature established the Montana Forest and Conservation Experiment Station as a non-profit organization devoted to the scientific investigation of natural resource problems. The station serves as the research unit of the University of Montana School of Forestry with the dean functioning as the Station Director. The purposes of the station are stated in Chapter 3, Section 28-303. The main purpose is:

"To study the forest and forest land resources of the state to the end that the state and its citizens may attain the highest economic and social benefits from the forest soils within the state and the influences and products flowing therefrom."

Through its research and publications, the station seeks to enhance public understanding of forestry and conservation and contribute to the wise use of our nation's timber, water, range, wildlife, and recreation resources.





# BUREAU OF MINES AND GEOLOGY

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	26.82	26.82	26.82	.00	26.82	.00	26.82
Personal Services	955,117.46	976,772	976,772	1,013,566	976,772	36,794	1,013,566
Operating Expenses	348,692.29	366,652	368,719	331,925	368,924	-36,794	332,130
Equipment	19,945.29	28,500	28,500	28,500	28,500	0	28,500
Debt Service	3,400.00	0	0	0	0	0	0
Total Agency Costs	<u>\$1,327,155.04</u>	<u>\$1,371,924</u>	<u>\$1,373,991</u>	<u>\$1,373,991</u>	<u>\$1,374,196</u>	<u>\$0</u>	<u>\$1,374,196</u>
Current Unrestricted Fund	1,327,155.04	1,371,924	1,373,991	1,373,991	1,374,196	0	1,374,196
Total Funding Costs	<u>\$1,327,155.04</u>	<u>\$1,371,924</u>	<u>\$1,373,991</u>	<u>\$1,373,991</u>	<u>\$1,374,196</u>	<u>\$0</u>	<u>\$1,374,196</u>
Independent Operations	1,327,155.04	1,371,924	1,373,991	1,373,991	1,374,196	0	1,374,196
Total Program Costs	<u>\$1,327,155.04</u>	<u>\$1,371,924</u>	<u>\$1,373,991</u>	<u>\$1,373,991</u>	<u>\$1,374,196</u>	<u>\$0</u>	<u>\$1,374,196</u>

## DESCRIPTION

The Bureau of Mines and Geology, a public service agency and research entity of the Montana College of Mineral Science and Technology, is the only earth science research agency in Montana state government, and is responsible for assisting in the orderly development of the state's mineral, energy and groundwater resources. The agency gathers, field tests, analyzes, catalogs and disseminates mineral energy and groundwater information.

According to 75-607 R.C.M., 1947, Amended as enacted by the Legislature of the State of Montana, the object and duties of the Montana Bureau of Mines and Geology shall be the following:

1. To collect, to compile and to publish statistics relative to Montana geology, mining, milling and metallurgy.
2. To collect typical geological and mineral specimens and samples of products, to collect photographs, models and drawings of appliances used in the mines, mills, and smelters of Montana.
3. To collect a library and a bibliography of literature pertaining to or useful for the progress of geology, mining, milling and smelting in Montana.
4. To study the geological formations of the state, with special reference to their economic mineral resources, both metallic and nonmetallic and with special reference to groundwater.
5. To examine the topography and physical features of the state, with reference to their practical bearing upon the occupation of the people.
6. To study the mining, milling and smelting operations carried on in the state, with special reference to their improvement.
7. To prepare and to publish bulletins and reports, with necessary illustrations and maps, which shall embrace both a general and a detailed description of the natural resources and geology, mines, mills and reduction plants of the state.
8. To make qualitative examination of rocks and mineral samples.
9. To consider such other scientific and economic problems as in the judgment of the State Board of Education (Board of Regents) are of value to the people of the state.

10. To communicate special information of Montana geology, mining and metallurgy.

11. To cooperate with the other departments of the Montana University System, with the State Mine Inspector, and with other departments of the state government, as may be mutually beneficial/ and to cooperate with the U.S. Geological Survey and with the U.S. Bureau of Mines, in accordance with the regulations of those institutions.

12. It shall also be the duty of the Montana Bureau of Mines and Geology, upon the request of the Department of State Lands, to make examinations of state lands with regard to their geological formation and structure and as to all features relating to the character, extent and probable value of mineral deposits therein, including oil and gas; provided, however, that these services by the Bureau shall be limited to the time that its personnel has available for such work in addition to its duties as defined in the preceding sections. Written reports may be prepared of the examinations made.

Subject to the same limitations and conditions as above enumerated, the Montana Bureau of Mines and Geology shall carry on field examinations for other branches and agencies of the government of the state.

In fulfilling these duties, the bureau provides extensive advisory, technical and informational services on the geology, mineral, energy and water resources of Montana. These services are used by a wide range of Montana citizens, by other Montana state agencies, and county and local governments, by federal agencies, and by a large number of out-of-state private citizens and corporations. Several thousand requests for information on Montana geology, earth and water resources commonly are received each year.

In addition, the Bureau of Mines and Geology conducts basic and applied research on regional geology and hydrogeology, mineral and energy resources, earthquakes and related geologic hazards, landslides, ground and surface water resources and water quality, coal hydrogeology and on other related topics. Many of these studies are conducted jointly with other state and federal agencies and with local governments and other local groups.

## AGENCY ORGANIZATION

The Administrative division includes secretarial, clerical, administrative and accounting support personnel. The Division works closely with the college business office in providing general administrative support for processing travel documents, equipment purchasing, budget control and for various personnel administrative tasks.

The Publications Division provides a variety of advisory, technical and information services related to the geological, mineral and ground-water resources of the states. The division disseminates the results of its projects and programs through its own publications. Publications include bulletins, special publications, geologic map series, hydrogeologic map series, pamphlets and open-file reports.

The Geology and Mineral Resources Division provides information in the form of maps and reports on the state's mineral and energy resources, geologic hazards and geology, and provides assistance to the state's mineral industries. The major programs of the Geology and Mineral Resources Division include the geologic framework program, the mineral resources program and the educational program.

The Hydrology Division has numerous, diverse programs relating to hydrologic problems and opportunities in Montana. Projects in the Division's Butte and Billings offices were active in hydrogeologic aspects of oilfield exploration and wastes, mining activities and exploration, agricultural land uses, agricultural chemicals, hazardous-wastes, ground-water recharge and development for irrigation and broad dissemination of general hydrologic data.

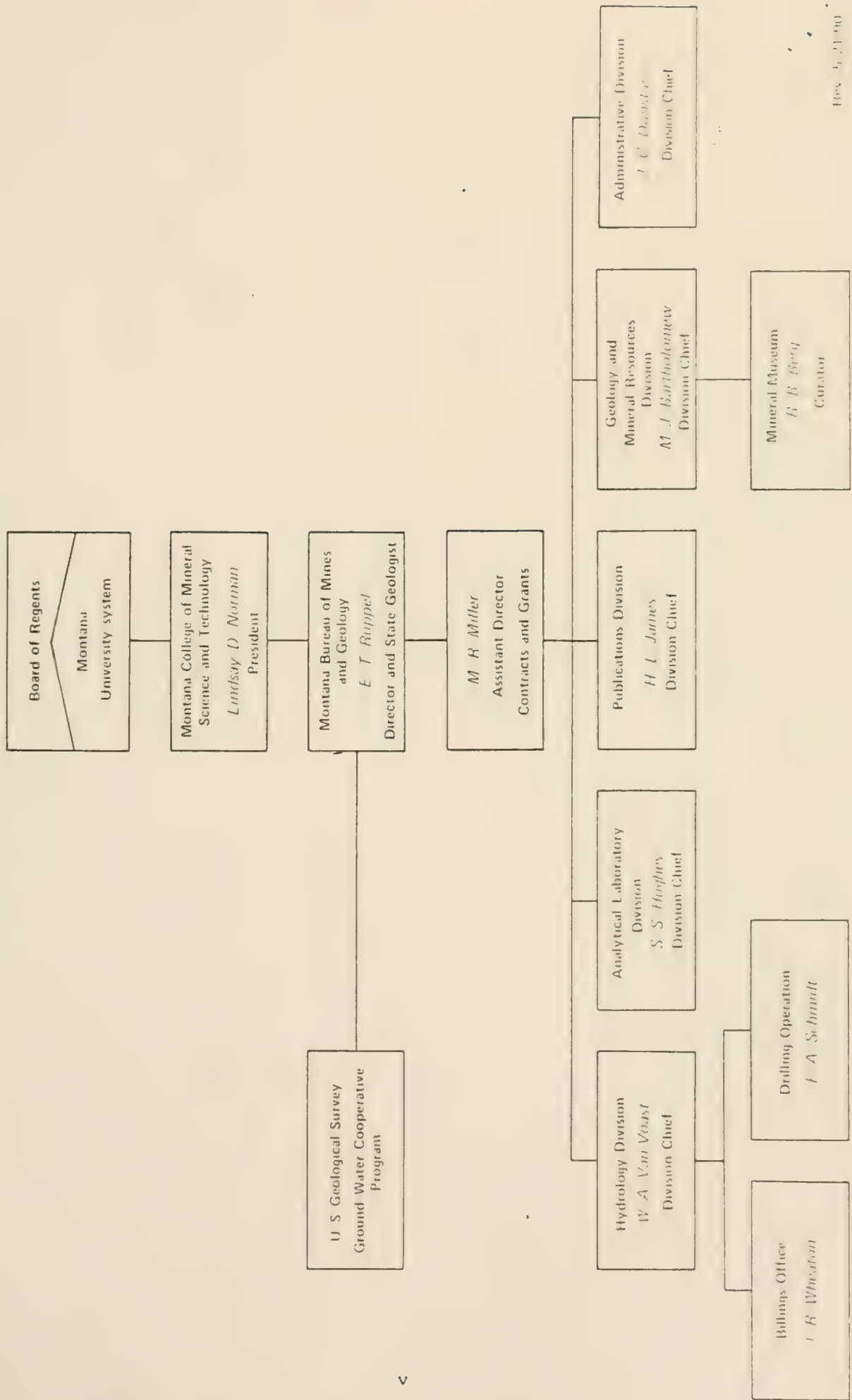
The Analytical Division comprises a series of research quality, production-oriented inorganic laboratories for multiple element analyses, and other chemical and physical testing, of nearly all conceivable types of materials. Current applications in the Analytical Division are concentrated on groundwater and surface water samples, while additional operations include analyses of soil, rock, coal and some biologic materials.

## BASE FUNDING

State special revenue from the sales of maps and publications is budgeted at approximately \$44,000 per year. The remainder is general fund.



# MONTANA BUREAU OF MINES AND GEOLOGY ORGANIZATION CHART, 1988-90











MONTANA SCHOOL FOR THE DEAF AND BLIND

GREAT FALLS, MONTANA





# MONTANA SCHOOL FOR THE DEAF AND THE BLIND

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	84.54	84.54	84.54	1.61	86.15	1.61	86.15
Personal Services	2,233,990.00	2,372,289	2,390,828	53,497	2,444,325	2,389,987	2,443,454
Operating Expenses	449,134.31	499,639	507,345	-18,538	488,807	512,123	493,587
Equipment	9,109.57	12,000	12,000	-1,079	10,921	12,000	10,921
Debt Service	19,857.12	6,975	7,900	0	7,900	7,900	7,900
<b>Total Agency Costs</b>	<b>\$2,712,091.00</b>	<b>\$2,890,903</b>	<b>\$2,918,073</b>	<b>\$33,880</b>	<b>\$2,951,953</b>	<b>\$2,922,010</b>	<b>\$2,955,862</b>
General Fund	2,367,325.48	2,536,102	2,574,566	48,758	2,623,324	2,578,503	2,622,323
State Special Revenue Fund	160,042.32	147,307	147,307	15,122	162,429	147,307	167,339
Federal Special Revenue Fund	184,723.20	207,494	196,200	-30,000	166,200	196,200	166,200
<b>Total Funding Costs</b>	<b>\$2,712,091.00</b>	<b>\$2,890,903</b>	<b>\$2,918,073</b>	<b>\$33,880</b>	<b>\$2,951,953</b>	<b>\$2,922,010</b>	<b>\$2,955,862</b>
Administration	213,204.35	213,102	200,480	382	200,862	200,440	200,821
General Services	242,660.20	283,193	282,109	-38,369	243,740	282,023	243,614
Student Services	749,374.67	827,033	844,006	16,416	860,422	846,679	863,071
Education	1,506,851.78	1,567,575	1,591,478	55,451	1,646,929	1,592,868	1,648,356
<b>Total Program Costs</b>	<b>\$2,712,091.00</b>	<b>\$2,890,903</b>	<b>\$2,918,073</b>	<b>\$33,880</b>	<b>\$2,951,953</b>	<b>\$2,922,010</b>	<b>\$2,955,862</b>

The Montana School for the Deaf and the Blind (MSDB), established in 1893, is mandated by the legislature to provide educational services to hearing and visually impaired children whose impairment is such as to preclude their making normal progress in regular public schools. A maximum of 80 students reside on campus in cottages designed to provide a home-like atmosphere. An additional 50 students whose families live in Great Falls attend MSDB as day students. The school also serves approximately 190 visually impaired children in their home school district through services provided by resource consultants employed by the school.

Additionally, the school contracts with 16 to 20 speech/language therapists to make home visits to families with hearing impaired infants. In total, the school serves approximately 250 to 300 children with hearing and/or visual impairments.

The school's budget supports four programs: Administration; General Services; Student Services; and Education. Addendum A presents an organizational chart which delineates major program areas by function and by line of authority.

## PHILOSOPHY

The philosophy of the Montana School for the Deaf and the Blind is to extend to all children their rightful heritage--an educational program so planned, adapted, and conducted as to provide all children the education and opportunity to take their rightful place in a democratic society. Fundamentally, the purpose of education for the hearing impaired and visually impaired child is to attain attitudes and understandings, skills and abilities, and knowledge which make it possible for them to become self-supporting contributing members of society.

## MISSION

The mission of the Montana School for the Deaf and the Blind is to provide to hearing impaired and visually impaired individuals a quality comprehensive education that will provide the opportunities to enable them to achieve their greatest potential of independence and success. The school shall also serve as a resource center providing information, consultation, technical assistance and

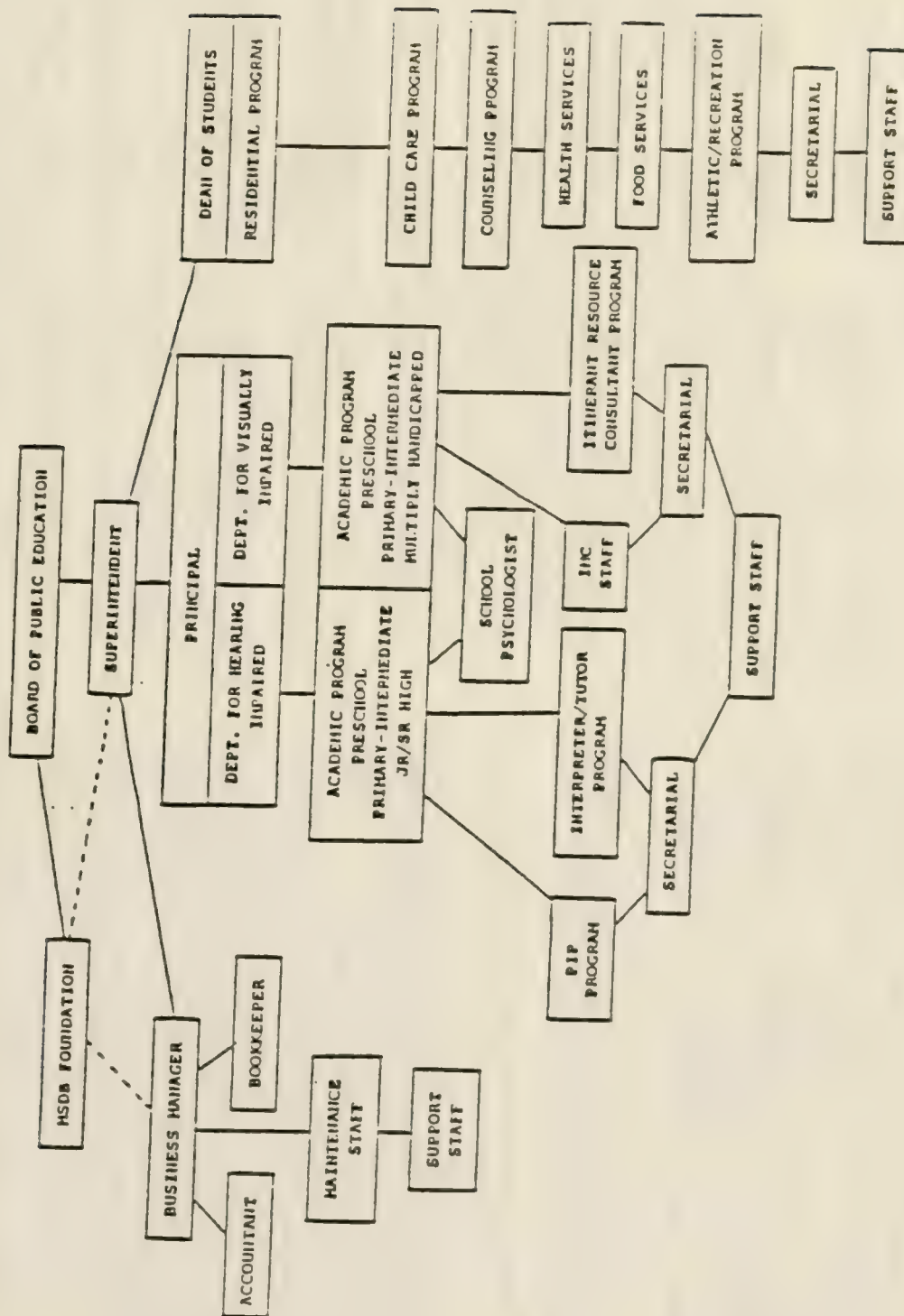
leadership to (1) parents of handicapped individuals not yet enrolled in an educational program, (2) to public schools of the state having such handicapped individuals enrolled, and (3) to organizations and individuals concerned with services to similarly impaired people.

#### **AUTHORIZATION**

Authority for the school is contained in Title 20, Chapter 8, Part 1 of the Montana Codes Annotated (MCA).

The school is governed by the Board of Public Education and operates under Board approved policies and administrative rules. Administrative rules that impact on the Montana School for the Deaf and the Blind are contained in Title 10, Chapter 61, Sup-chapter 1 of the Administrative Rules of Montana (ARM).

# HOUSTON SCHOOL FOR THE DEAF AND THE BLIND





# ADMINISTRATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Deer Recommended	Base	Fiscal 1993 Incr/Deer Recommended
Full Time Equivalent Employees	5.00	5.00	5.00	5.00	5.00	5.00
Personal Services	159,414.76	156,527	157,900	158,282	156,988	157,369
Operating Expenses	40,860.67	49,600	42,580	42,580	43,452	43,452
Equipment	972.00	0	0	0	0	0
Debt Service	11,956.92	6,975	0	0	0	0
Total Agency Costs	\$213,204.35	\$213,102	\$200,480	\$200,862	\$200,440	\$200,821
General Fund	213,204.35	213,102	200,480	200,862	200,440	200,821
Total Funding Costs	\$213,204.35	\$213,102	\$200,480	\$200,862	\$200,440	\$200,821

The Administration Program is responsible for the centralized administrative functions for the school, including accounting, budgeting, personnel and purchasing. The Administration Program employs 5.0 FTE.

The Administration Program objectives include, but are not limited to, the following:

- (1) Leadership--to provide effective leadership for the total school program including administration, education, student services and general services.
- (2) Supervision--to provide general supervision for the total school program and direct supervision for the heads of departments.
- (3) Evaluation--to develop, implement and maintain an employee evaluation system for the total school program including the heads of departments which will assist employees to grow and develop professionally.
- (4) Business Affairs--to conduct the business affairs of the school (including accounting, purchasing and personnel management) in accordance with Montana statutes, the Montana Operations Manual, Board of Public Education policies and procedures and generally accepted accounting and business practices.
- (5) Budgeting--to prepare biennial budgetary estimates and projections as required and as requested; to prepare annual budgetary documents and information as needed; to maintain and disseminate budget status reports; and to render final accounting summaries at the end of each fiscal year.
- (6) Grant Applications--to prepare applications for federal funding of special projects (including, but not limited to, Chapter I and II projects);

to maintain accounting records and budgetary documentation relating to federally funded projects; to render final accounting summaries at the end of each fiscal year.

- (7) Public Relations--to establish and maintain an effective working relationship with the legislature, other agencies, school districts and constituents; to establish and maintain an effective public relations effort to ensure that the general public is aware of the school and its programs.

## CURRENT LEVEL SERVICES

The Administration Program is staffed by the school Superintendent, Business Manager, two accounting clerks and a secretary. Functions performed by staff are embodied in the program objectives outlined above.

Non-Operating Expense--The program summary table shows a non-operating expenditure of \$6,975 in fiscal 1991. The expenditure of \$6,975 is the final installment on purchase of the school's SL1 phone system.

## CURRENT LEVEL FUNDING

The Administration Program is funded entirely from the general fund.



## GENERAL SERVICES PROGRAM

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	4.00	4.00	4.00	.00	4.00	4.00
Personal Services	87,687.95	95,835	95,641	201	95,833	96,034
Operating Expenses	154,703.25	187,358	186,468	-38,570	186,190	147,580
Equipment	269.00	0	0	0	0	0
<b>Total Agency Costs</b>	<b>\$242,660.20</b>	<b>\$283,193</b>	<b>\$282,109</b>	<b>\$-38,369</b>	<b>\$282,023</b>	<b>\$243,614</b>
General Fund	242,660.20	283,193	282,109	-38,369	282,023	243,614
<b>Total Funding Costs</b>	<b>\$242,660.20</b>	<b>\$283,193</b>	<b>\$282,109</b>	<b>\$-38,369</b>	<b>\$282,023</b>	<b>\$243,614</b>

The General Services Program is responsible for the maintenance and operation of the school's facilities, grounds and vehicles. The school employs 4.0 FTE in this program.

The General Services Program goals and objectives include, but are not limited to, the following:

- (1) Building Maintenance--to support the total school program through the establishment of an ongoing program of maintenance and repair of all school buildings to ensure that classrooms, cottages and other areas are attractive, safe and comfortable for use and enjoyment by students and staff.
- (2) Custodial Service--to support the total school program through the provision of daily custodial service to school buildings to ensure that they are clean, sanitary and comfortable for use by students and staff.
- (3) Vehicle Maintenance--to support the total school program through the establishment of an ongoing program of school vehicle maintenance and repair to ensure that the vehicles are safe and dependable for use by students and staff.
- (4) Grounds Maintenance--to establish an ongoing program of grounds maintenance including, but not limited to, the watering and mowing of grassy areas; trimming of trees and shrubs; and the removal of snow and ice accumulations.

## CURRENT LEVEL SERVICES

Major functions performed by the General Services Program include providing:

- (1) Janitorial services to campus buildings;
- (2) Preventative maintenance and

repair to buildings and equipment; (3) Preventative maintenance on the school's vehicles; and (4) Maintenance and upkeep of campus grounds including removal of snow and ice accumulations.

Addendum B and C present an inventory of the school's physical plant and vehicles, respectively. The maintenance department provides janitorial and preventative maintenance services to eight (8) campus buildings that have a combined square footage of 170,448 and preventative maintenance services to three (3) rentals that have a combined square footage of 3,660.

Addendum C lists six (6) school vehicles, five of which are used for student transportation. The first three (3) vehicles listed have excessive mileage, are in poor condition and the school requests that these vehicles be replaced.

Additionally, the General Services Program is responsible for maintaining 11.5-acre campus grounds, 1.5 miles of sidewalks and five parking lots.

## CURRENT LEVEL FUNDING

Funding for the General Services Program is provided entirely from the General Fund.

## **C.E.A.S.D. ACCREDITATION**

The Conference of Educational Administrators Serving the Deaf (C.E.A.S.D.) sent an accreditation review team to the Montana School for the Deaf and Blind on January 21, 1990. The review team recommended improvement be made in several areas before the school can be fully accredited. The review team strongly recommended the immediate addition of personnel to the General Services Program, citing the tremendous workload of the current staff. The C.E.A.S.D. review team also recommended the replacement of the three older vehicles listed in Addendum C, citing their age and condition, and the importance of field trips to the educational and social development of deaf children.

**ADDENDUM B**  
**MONTANA SCHOOL FOR THE DEAF AND THE BLIND**  
**PHYSICAL PLANT INVENTORY**

<b>BUILDINGS</b>	<b>YEAR CONSTRUCTED</b>	<b>APPROX. SQUARE FOOTAGE</b>	<b>CONDITION "GOOD" "FAIR" "POOR"</b>
ADMIN./CLASSROOM BASEMENT	1972	41,551 28,000	GOOD GOOD
WOOD SHP./LAPIDARY/ HOME EC.	1956	8,100	FAIR
BOILER HOUSE/STORAGE	1952	3,000	FAIR
BLIND/MH CLASSROOM BUILDING/STORAGE	1960	8,448	FAIR
RES. COTTAGE 1	1983	22,500	GOOD
FOOD SER./DINNING ROOM BUILDING	1983	10,000	GOOD
RES. COTTAGE 2	1983	22,500	GOOD
GYMNASIUM	1984	26,349	GOOD
<b>TOTAL CAMPUS</b>	<b>170,448 SQ. FEET</b>		
RENTAL UNIT 1	1950	1,600	FAIR
RENTAL UNIT 2	1945	1,100	POOR
RENTAL UNIT 3	1945	960	POOR
<b>TOTAL RENTAL</b>	<b>3,660 SQ. FEET</b>		
<b>TOTAL CAMPUS &amp; RENTAL</b>	<b>174,108 SQ. FEET</b>		

**ADDENDUM C**  
**MONTANA SCHOOL FOR THE DEAF AND THE BLIND**  
**VEHICLE INVENTORY**

VEHICLE	YEAR PURCHASED	ESTIMATED 01-02-90 MILEAGE		CONDITION "GOOD" "FAIR" "POOR"
		01-02-90 MILEAGE	01-02-91 MILEAGE	
GMC VAN	1975	76,741	81,941	POOR
GMC VAN	1978	83,520	90,520	POOR
DODGE ASPEN	1980	123,878	136,278	POOR
GMC 1/2T PICKUP	1981	63,253	70,281	FAIR
DODGE VAN	1986	51,185	64,185	GOOD
FORD SCHOOL BUS*	1989	2,242	4,484	GOOD

\*SCHOOL BUS IS BEING PURCHASED ON A FIVE-YEAR LEASE/PURCHASE PLAN--LAST PAYMENT TO BE MADE IN FY'94 AT WHICH TIME THE SCHOOL ACQUIRES OWNERSHIP. OTHER VEHICLES LISTED ARE OWNED BY THE SCHOOL.



# STUDENT SERVICES

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	31.13	31.13	31.13	.77	31.90	.77	31.90
Personal Services	610,893.65	680,373	676,597	16,414	693,011	16,387	692,563
Operating Expenses	127,994.51	142,660	155,509	2	155,511	5	158,608
Equipment	2,586.31	4,000	4,000	0	4,000	0	4,000
Debt Service	7,900.20	0	7,900	0	7,900	0	7,900
<b>Total Agency Costs</b>	<b>\$749,374.67</b>	<b>\$827,033</b>	<b>\$844,006</b>	<b>\$16,416</b>	<b>\$860,422</b>	<b>\$16,392</b>	<b>\$863,071</b>
General Fund	714,348.47	789,033	809,006	16,416	825,422	16,392	828,071
Federal Special Revenue Fund	35,026.20	38,000	35,000	0	35,000	0	35,000
<b>Total Funding Costs</b>	<b>\$749,374.67</b>	<b>\$827,033</b>	<b>\$844,006</b>	<b>\$16,416</b>	<b>\$860,422</b>	<b>\$16,392</b>	<b>\$863,071</b>

The Student Services Program provides twenty four (24) hour care to residential students enrolled at the Montana School for the Deaf and the Blind. Additionally, day students are served lunch and are provided with medical services from the school's infirmary as needed.

The Student Services Program provides both non-direct care and direct care services. Non-direct care includes services performed by the cottage administrative staff and school food service. Direct care includes those services provided by the school's infirmary and residential child care workers. Addendum D presents an organizational chart.

Student Services Program objectives include providing students with residential facilities inclusive of child care services, health services, recreational services, and social education, which includes training in social adjustment and self concept development.

## DIRECT CARE

The Direct Care Program is responsible for the care and supervision of from fifty five (55) to eighty four (84) residential students ranging in age from infancy to twenty one (21) years.

The goals and objectives of the Direct Care Program include, but are not limited to, the following:

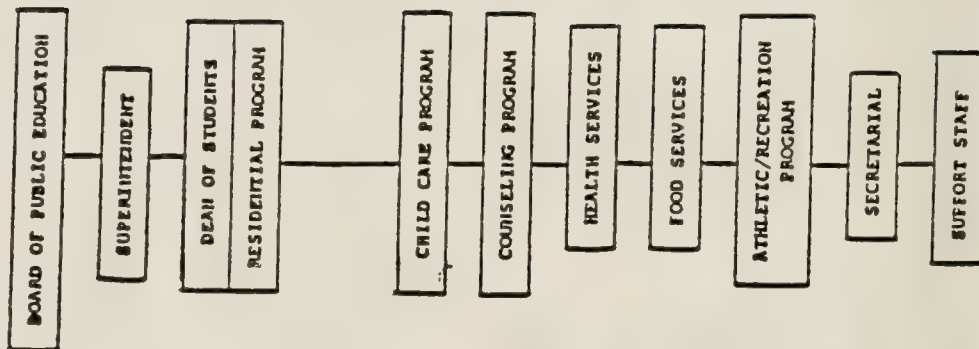
- (1) Supervision--to provide continuous supervision of the students during after school hours and twenty four (24) hour care on weekends.
- (2) Health Care--to meet the needs of the students in dispensing over the counter and prescribed medications, as well as provide for the basic home health care needs of the students.
- (3) Transportation--to transport students to and from medical appointments, off campus activities, and to the bus terminal or airport on scheduled travel days.
- (4) Teach Daily Living Skills--to teach and supervise children, depending on the handicapping condition and age of the child, in the acquisition of daily living skills, such as making beds, bathing, care of clothes, and preparation of meals.
- (5) Teach Social Skills--to teach and serve as role models for children in developing appropriate social behaviors, interpersonal relationships, and acceptable work ethics.

## CURRENT LEVEL SERVICES

CARE AND SUPERVISION OF STUDENTS--Services provided include the following:

- (1) Supervision of all residential students during after school hours and twenty four hour care on weekends.

MONTANA SCHOOL FOR THE DEAF AND THE BLIND



- (2) Supervision and serving of meals, depending on the handicapping condition and age of the children.
- (3) Supervision and assistance in dressing, washing clothes, and bathing, depending on the handicapping condition and age of the children.
- (4) Cleaning of cottage living rooms, bedrooms, activity rooms, and hallways. Older children who have appropriate skill levels assist in cleaning these areas.

**HEALTH CARE--**The school's infirmary dispenses medications on a daily basis as prescribed by physicians or requested by parents. Approximately 14 to 15 students are scheduled into the infirmary each day to receive medications prescribed by their doctor and an additional 1 to 2 students receive minor medical care on a daily basis for conditions relating to their handicap. Additionally, ill children are confined to the infirmary overnight on an estimated basis of two (2) children three (3) nights per week.

#### **CURRENT LEVEL FUNDING**

The Direct Care Program is funded from the general fund and \$35,000 in federal school food reimbursements.

#### **C.E.A.S.D. ACCREDITATION**

The Conference of Educational Administrators Serving the Deaf (C.E.A.S.D.) sent an accreditation review team to the Montana School for the Deaf and the Blind on January 21, 1990. The review team made the following recommendations for the residential services program:

- (1) Recommended an increase in inservice training to ensure that each staff member has competent first aid, CPR skills, can communicate at the appropriate level with students, and has knowledge where appropriate of lifting techniques, range of motion activities, etc.
- (2) Recommended the addition of 3.08 FTE to the number of staff available during the hours between midnight and 6:00 AM to ensure adequate supervision of students in case of emergencies.
- (3) Recommended salaries be increased to aid in recruiting and retaining competent staff.
- (4) Recommended measures be investigated to alleviate the difficulties imposed by inadequate health facilities. The team strongly recommended the provision of new facilities to adequately house the infirmary facilities. This issue was submitted in the school's long range building proposal.
- (5) Recommended efforts be made to have medical needs of the students attended to by medically trained personnel.

#### **NON-DIRECT CARE**

Functions performed within this program are administration and school food service.

#### **CURRENT LEVEL SERVICES**

**ADMINISTRATION--**The residential administrative staff includes the Dean of Students, Assistant Dean of Students and the Director of Health and Food Services. These individuals provide for the daily administrative operation of the Student Services Program including, but not limited to, the following:

- (1) Development of all cottage related policies.
- (2) Supervision and evaluation of all cottage staff (35 staff).
- (3) Procurement of all supplies including food.
- (4) Development and evaluation of extracurricular activities.
- (5) Counseling and evaluation of all resident students.
- (6) Counseling and advising parents of their children's activities.
- (7) Organizing and supervising student travel.

**FOOD SERVICE--**This program is responsible for providing nutritional and well balanced meals for students, as well as for the general cleanliness of the dining room. Additionally, the Food Service Program assists in the preparation and serving of food items for school related events.

The Food Service Program operates approximately 185 days out of the calendar year. The program serves three (3) meals per day plus any food needed for extracurricular activities such as spring and fall sports banquets, senior prom, homecoming, and any other activity provided for in the school calendar. In fiscal 1989, the Food Service Program prepared and served 50,555 meals, excluding meals prepared for extracurricular activities.

**STUDENT TRANSPORTATION--**The cottage staff transport students to medical appointments, off campus activities, and to the bus terminal and airport on scheduled travel days. This represents approximately 3,500 passenger trips each school year.

There are nine scheduled travel days in the school year where residential students are transported home. Students are transported home via commercial air and bus carriers, and by parents who are reimbursed for personal car mileage. Presented below in Table 1 is the travel budget for fiscal 1991, 1992 and 1993. Commercial air travel is projected to increase by six percent each fiscal year from fiscal 1991 to 1993.



TABLE 1  
STUDENT TRAVEL BUDGET  
FISCAL 1991-1993

BUDGET ITEM	# OF STUDENTS	APPROPRIATED FISCAL 1991	REQUESTED FISCAL 1992	REQUESTED FISCAL 1993
COMMERCIAL AIR	30	\$38,856	\$48,692	\$48,692
COMMERCIAL BUS	20	3,124	8,234	8,234
PARENT REIMB.	10	12,386	5,352	5,352
SUPERVISION	--	6,596	846	846
TOTAL	60	\$60,962	\$63,124	\$63,124
	==	=====	=====	=====

The non-operating expenditure of \$7,900 in fiscal year 1992 and 1993 is for the lease/purchase of a school bus equipped with a wheelchair lift. The school will make the last payment in fiscal 1994 at which time the school will acquire ownership.

#### CURRENT LEVEL FUNDING

This program is funded entirely from the state general fund.



# EDUCATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992 Base	Fiscal 1992 Incr/Decr Recommended	Fiscal 1993 Base	Fiscal 1993 Incr/Decr Recommended
Full Time Equivalent Employees	44.41	44.41	44.41	.84	44.41	.84
Personal Services	1,375,993.64	1,439,554	1,460,690	36,500	1,497,190	36,498
Operating Expenses	125,575.88	120,021	122,788	20,030	142,818	20,069
Equipment	5,282.26	8,000	8,000	-1,079	6,921	-1,079
Total Agency Costs	<u>\$1,506,851.78</u>	<u>\$1,567,575</u>	<u>\$1,591,478</u>	<u>\$55,451</u>	<u>\$1,646,929</u>	<u>\$55,488</u>
General Fund	1,197,112.46	1,250,774	1,282,971	70,329	1,353,300	65,456
State Special Revenue Fund	160,042.32	147,307	147,307	15,122	162,429	20,032
Federal Special Revenue Fund	149,697.00	169,494	161,200	-30,000	131,200	-30,000
Total Funding Costs	<u>\$1,506,851.78</u>	<u>\$1,567,575</u>	<u>\$1,591,478</u>	<u>\$55,451</u>	<u>\$1,646,929</u>	<u>\$55,488</u>

(5) To provide students with vocational education and vocational training which will enable the student to make a choice in both a vocation and a path for post secondary training, and to develop marketable skills for employment.

## CURRENT LEVEL SERVICES

Major functions performed within the Education Program include the following:  
(1) supervisory and secretarial support of all functions which occur within the Education Program; (2) interpreting and tutorial services for hearing impaired students integrated into public school programs for part of the school day; (3) itinerant and consultation services for visually impaired students who are served within each student's home community;

(4) provide large print, braille materials and technical equipment for use by visually impaired students at the Montana School for the Deaf and the Blind (MSDB) and students served in their home communities; provide support services in the areas of orientation and mobility, speech development, physical therapy, audiological and psychological assessments and counseling; (6) provide counseling to parents of hearing impaired infants with direct intervention services for the children; (7) provide counseling and referral services to parents of visually impaired infants; and (8) provide a comprehensive educational program to hearing impaired and visually impaired children. These functions are performed within the framework of the following programs:

The Education Program is given the responsibility by the legislature of Montana to provide educational service to hearing and visually impaired children whose impairment is such as to preclude their making normal progress in the regular public schools. The Education Program serves children ranging in age from infancy to 21 years. Addendum E presents an organizational chart for the Education Program.

Education Program goals include, but are not limited to, the following:

- (1) To provide parent services inclusive of information, referral, counseling to help the family adjust to the handicapping condition of hearing impairment or visual impairment and to assist them as they participate in the educational planning and programming for their child.
- (2) To provide early educational intervention services to the hearing impaired or visually impaired preschool child in the home in efforts to minimize the educational delay common to the handicapping condition of deafness and blindness.
- (3) To provide specialized educational direct services germane to the child's handicapping condition inclusive of language acquisition, speech development, mobility training, and maximum use of residual hearing and residual vision.
- (4) To provide students with a comprehensive educational program which includes an instructional program ranging from preschool to twelfth grade, extracurricular activities, social education program, athletics, vocational education, and supportive services comparable to that of educational opportunities generally afforded to non-handicapped children.



- (1) Administration
- (2) Interpreter/Tutor Program
- (3) Itinerant Services
- (4) Support Services
- (5) Chapter I Program
- (6) Parent/Infant Program
- (7) Education of the Hearing Impaired
- (8) Education of the Visually Impaired

**ADMINISTRATION**--This program is staffed by the Principal and two clerk/typists. Major functions performed include: (1) program review and development; (2) budgeting; (3) grant writing; (4) curriculum review and development; (5) class scheduling and scheduling of staff assignments; (6) supervision and evaluation; (7) organizing and chairing Child Study Team (CST) meetings on each child enrolled at MSDB on a basis of at least one CST per child per year; (8) processing student referrals; and (9) coordination of services provided by other agencies to students enrolled at MSDB.

Assisting the Principal are two full-time clerk/typists who provide all clerical support to the Education Program. Additionally, the two clerk/typists spend at least sixty (60) minutes each day transporting students to Great Falls High School and back to MSDB.

**INTERPRETER/TUTOR SERVICES**--There are thirty-eight students mainstreamed in classes at East Middle School and Great Falls High School. These students are enrolled in these integrated settings from one to six class periods per day. Staff interpret for a cumulative total of 43 classes per day or 76 hours per day. This does not include time spent interpreting for extracurricular activities such as football, basketball, band, drama, etc., and time spent tutoring students. The Interpreter/Tutors, in large part, determine the success of these students in this mainstreamed environment.

**ITINERANT SERVICES**--The school employs three Itinerant Resource Consultants who serve 182 visually impaired students dispersed across the state. Twenty two of these students are enrolled at MSDB. The remaining students are either preschool age or attend school in their home community. The consultants work directly with these students by providing braille and large print materials, teaching braille and the abacus, providing technical equipment, and training in orientation/mobility. One textbook, when converted to braille, can be as many as 45 volumes. Additionally, the consultants participate in Child Study Team (CST) meetings on each child they serve, and counsel local school district personnel and parents on the development/implementation of the child's Individualized Education Plan (IEP).

**SUPPORT SERVICES**--This program component includes audiological services, psychological services, physical therapy and speech therapy. Some major functions include: (1) evaluation of each student upon entrance to MSDB; (2) evaluation of students referred by local public schools; (3) interpretation of evaluation results to parents, school teachers and other professional staff at individual conferences and at CST meetings; and (4) consultation services are provided to local school districts. Additionally, the audiologist, psychologist, physical therapist, speech therapist and speech clinician work directly with each child enrolled at MSDB providing on-going therapy, screening, evaluation and counseling as mandated in each child's IEP.

**CHAPTER I SERVICES**--The federal E.C.I.A. Chapter I funds, which are a pass through grant from the Office of Public Instruction, are allocated to MSDB in two components. Component 1 is designated to serve students enrolled at MSDB. Component 2 is designated to serve students in their home school district.

Component 1 services include: (1) coordination and supervision of extracurricular activities offered at MSDB; (2) management of the recreational facility; (3) supervision and evaluation of self-help and behavioral programs offered within the Student Services Program; and (4) individual counseling for each residential student. Positions budgeted from this component include the school's recreation director and one and one-half counselor positions.

Component 2 services include: (1) receiving, cataloging, packaging and shipping of large print and braille textbooks to visually impaired students being served in their home school district; and (2) receiving, cataloging, packaging and shipping of captioned films and video tapes used by MSDB and other educational programs serving hearing impaired students. Positions budgeted from this component include two library aides and one and one-half itinerant consultants.

**PARENT/INFANT PROGRAM**--The Parent/Infant Program serves 32 preschool hearing impaired children dispersed across Montana. A coordinator employed by the school supervises 16 to 20 parent advisors who are on contract with the school to provide: (1) referral service for parents of infants and preschool hearing impaired children; (2) parental counseling; (3) video cassettes and cassette players to be used by parents to develop manual sign language communication skills; (4) auditory training equipment; (5) assistance to parents in working with preschool hearing impaired children using the total communication approach--speech, speech reading and manual communication; and (6) information to parents on appropriate educational programs available within the state.

**EDUCATION OF THE DEAF--**Major functions of this program include providing (1) academic and vocational classes for preschool students through the 12th grade, (2) outreach services for preschool children, and (3) on-going monitoring of student progress and educational placement.

Fifteen full-time certified instructors teach four self-contained classes (preschool through grade 3) and 70 other classes as part of the rotating schedule for grade 4 through grade 12. In addition to preparing lesson plans, adapting and preparing educational materials and teaching classes, the teaching staff is responsible to provide: (1) report cards every nine weeks; (2) individual progress reports for the CST meeting which is held at least once per year on each child; and (3) end of the year progress reports on each child. The teachers also attend Parent/Teacher Association meetings, staff meetings, inservice training sessions and supervise numerous after school activities.

**EDUCATION OF THE BLIND/VISUALLY IMPAIRED--**The major functions performed within this department include: (1) providing classes for preschool through high school visually impaired/multihandicapped children; (2) ordering large print and braille textbooks and other educational materials for students served at MSDB; (3) counseling visually impaired students and their parents; (4) instructing students in orientation/mobility, use of braille, and use of vision aids; and (5) providing educational evaluations for visually impaired students. Additionally, instructional staff serve as a resource to school districts serving visually impaired students.

#### **CURRENT LEVEL FUNDING**

The Education Program receives funding from the general fund, federal E.C.I.A. Chapter 1 and 2 funds, and interest income from school trust lands.

#### **C.E.A.S.D. ACCREDITATION**

The Conference of Educational Administrators Serving the Deaf (C.E.A.S.D.) sent an accreditation review team to MSDB on January 21, 1990. The review team made the following recommendations concerning the Education Program:

**ADMINISTRATION--**The review team's number one recommendation is that the school hire a supervising teacher of the deaf. The supervising teacher will take over some of the duties currently handled by the Principal to allow the Principal to devote more time to neglected areas such as development of a written, sequential curriculum, development of an inservice training plan, implementation of an performance appraisal system, and program monitoring and development. The school also requests a supervising teacher for the Department for Education of the Visually Impaired to provide leadership and supervision to this program.

The review team also recommended that the school develop a 5-year plan of staff professional development covering the entire staff. The school is requesting \$20,000 general fund in each year to fund the school's inservice training program.

**SUPPORT SERVICES--**The review team recommended the school hire a Career Education Coordinator to provide vocational preparation for non-college bound students and to gather and record data and statistics to help locate suitable employment. The Legislative Auditor cited the school for not performing these duties as required in Section 20-8-116, MCA.

Prior to 1987, the school discharged this statutory responsibility through employment of a full-time Career Education Coordinator. However, the 50th Legislature eliminated this position from the school's FTE. The school has not been able to reassign this responsibility to another staff member.











**MONTANA COUNCIL ON VOCATIONAL EDUCATION**

**Narrative Budget Justification**





# MONTANA COUNCIL ON VOCATIONAL EDUCATION

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Base	Fiscal 1992 Incr/Decr Recommended	Base	Fiscal 1993 Incr/Decr Recommended	
Full Time Equivalent Employees	2.50	2.50	2.50	.00	2.50	.00	2.50
Personal Services	73,214.07	81,663	82,011	-2,544	79,467	-2,545	79,479
Operating Expenses	53,999.48	57,280	60,289	26,901	87,190	26,903	87,294
Equipment	475.00	500	500	-500	0	-500	0
<b>Total Agency Costs</b>	<b>\$127,688.55</b>	<b>\$139,443</b>	<b>\$142,800</b>	<b>\$23,857</b>	<b>\$166,657</b>	<b>\$23,858</b>	<b>\$166,773</b>
Federal Special Revenue Fund	127,688.55	139,443	142,800	23,857	166,657	23,858	166,773
<b>Total Funding Costs</b>	<b>\$127,688.55</b>	<b>\$139,443</b>	<b>\$142,800</b>	<b>\$23,857</b>	<b>\$166,657</b>	<b>\$23,858</b>	<b>\$166,773</b>
Administration	127,688.55	139,443	142,800	23,857	166,657	23,858	166,773
<b>Total Program Costs</b>	<b>\$127,688.55</b>	<b>\$139,443</b>	<b>\$142,800</b>	<b>\$23,857</b>	<b>\$166,657</b>	<b>\$23,858</b>	<b>\$166,773</b>

## MISSION AND GENERAL DESCRIPTION

The mission of the Montana Council on Vocational Education is to carry out the mandated responsibilities as set forth in Public Law 98-524, Section 112, the Carl D. Perkins Vocational Education Act of 1984. The passage of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 provides secondary, postsecondary, and adult vocational education programs with federal assistance for another five years, from July 1, 1991 - June 30, 1996.

The Council's major purpose is to analyze and evaluate vocational education programs and services, including those which are assisted by the Job Training Partnership Act and to report to and advise the Governor, sole state agent (Montana Board of Regents), United States Secretary of Education and Secretary of Labor, business community, and general public as to how well the state's needs for vocational education are being met.

## AUTHORIZATION

The Montana State Council on Vocational Education was created in 1985 by Executive Order No. 3-85 to comply with the Carl D. Perkins Vocational Education Act of 1984, P.L. 98-524.

## AGENCY ORGANIZATION

The Montana Council on Vocational Education was created in 1985 to comply with the Carl D. Perkins Vocational Education Act of 1984 which states: "Each State which desires to participate in vocational education programs authorized by this Act for any fiscal year shall establish a state council." The organization chart appears on page 3.

The State Council submits a budget application to the U.S. Department of Education by July 1 of each program year and a grant is awarded subject to "the provisions of the approved State plan and applicable act and regulations." Payments under the grant award are made available through the Department of Education Payment Management System. The U.S. Department of Education, Office of Vocational and Adult Education, provides technical assistance and monitors the grant award.

The thirteen (13) members of the Council are appointed by the Governor for two-year terms and the Governor certifies to the U.S. Department of Education the establishment of the State Council.

The 50th Legislature designated the State Board of Regents of Higher Education as the agency to serve as the sole state agent for vocational education. As a result, the Board of Regents is responsible for the development of the state plan, and for the administration of activities pursuant to the Carl D. Perkins Vocational and applied Technology Act of 1990. Because the sole state agent does not have responsibility for Montana K-12 education, due to Montana Constitution and State Statute, the Board of Regents delegates the functions of supervision, evaluation, and reporting of all Perkins funded projects and activities to the Office of Public Instruction.

The Department of Labor and Industry, Research, Safety and Training Division, provides staff for the Job Training Coordinating Council which administers the federally funded job training programs under the Job Training Partnership Act.

The MCVE administrative staff conducts research, prepares reports, plans and conducts council meetings, arranges travel, manages council fiscal activity, maintains all council records, supervises the accomplishment of council goals and mandates, and represents the council. Council staff consists of the executive director, administrative assistant, and secretary.

#### **PROGRAM NAME: ADMINISTRATION**

#### **BASE PROGRAM**

The program provides the administrative, clerical, and staff support for the Montana Council on Vocational Education.

In accordance with the Carl Perkins Vocational Education Act, the Council works with the sole state agent on the development of the State Plan for Vocational Education, establishment of technical committees, evaluation criteria of federally funded vocational education programs, adult training and retraining programs, and industry-education partnerships. The Council conducts evaluations of federally funded vocational education programs, reviews articulation among various education and training programs, and participates in state planning for vocational education. The Council reports on evaluations of the vocational education program delivery systems assisted under the Perkins Act and under the Job Training Partnership Act, as well as the adequacy and effectiveness of coordination between the two Acts.

#### **BASE FUNDING**

Total program funding is provided by the U.S. Department of Education under P.L. 98-524. The program has been funded at \$120,000 for each program year, and carryover funds have been used to provide adequate base funding. At fiscal

year end 1990, \$62,456 of the State Council FY 90 grant was available for use in fiscal year 1991.

#### **INCREASE FROM BASE**

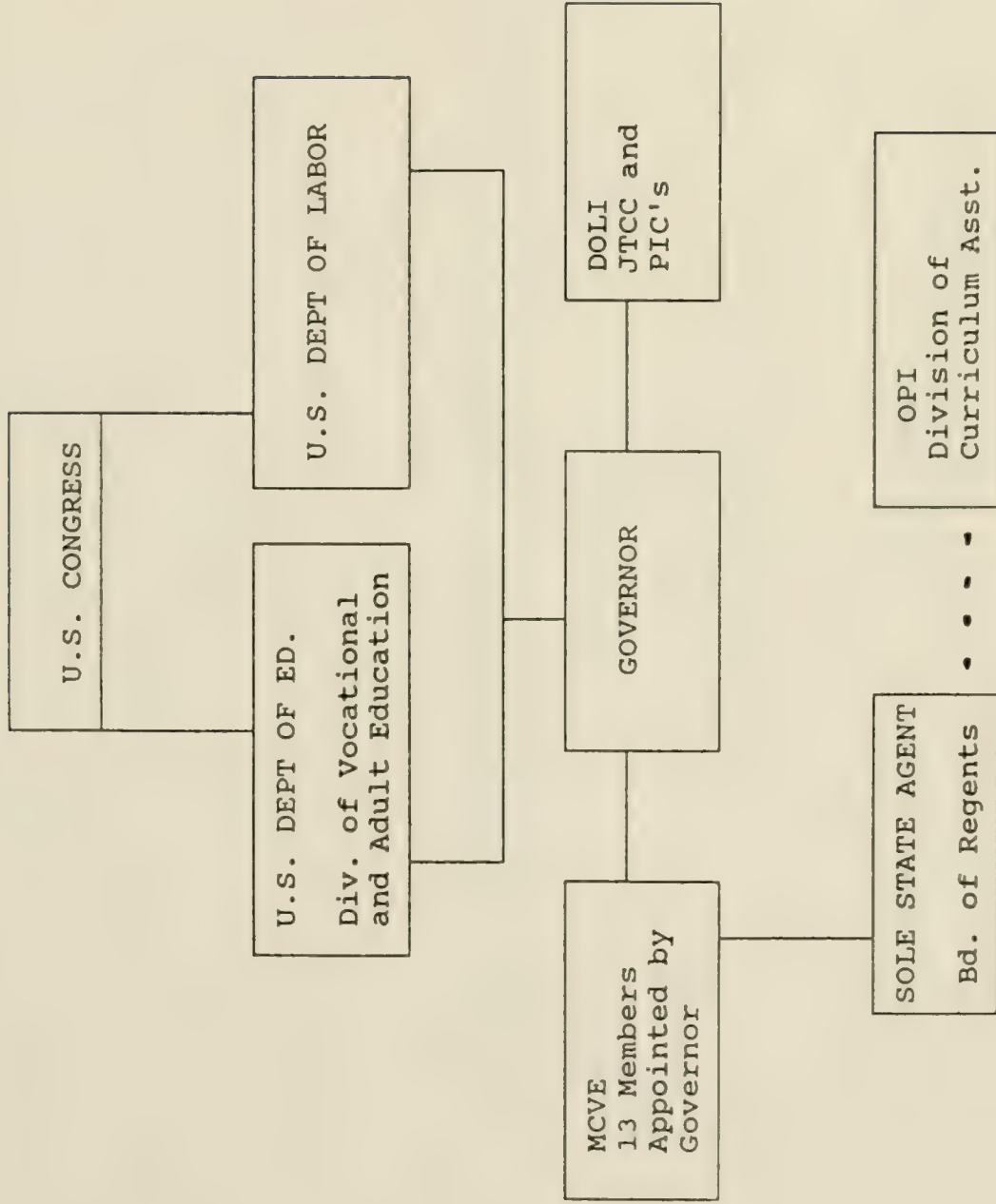
A bill to reauthorize the Carl D. Perkins Vocational Education Act for five years was approved by Congress and by the President in September 1990. The new law, P.L. 101-392, takes effect July 1, 1991, and provides annual funding increases of \$30,000 for total funding of \$150,000 for the State Council each year of the 1993 biennium.

#### **PERFORMANCE INDICATORS**

The following council activities for PY 92 and PY 93 are mandated under P.L. 98-524:

1. Number of council meetings. Minimum of four meetings each year.
2. Number of public hearings. Minimum of one each year.
3. Written report to Governor, sole state agent, JTCC, U.S. Secretary of Education, and U.S. Secretary of Labor concerning program delivery systems assisted under the Perkins Act and under JTPA; and the adequacy and effectiveness of the coordination between vocational education and JTPA. Due March 31, 1993.
4. Written report advising the sole state agent on additional mandates as stated in the Carl Perkins Vocational Education Act (P.L. 98-524, Sec. 112). To be submitted in fiscal year 1992.
5. Consult with sole state agent to:
  - (a) Amend and revise state plan for 1992-1994 in fiscal year 1992.
  - (b) Begin work on new state plan in fiscal year 1993.
6. Consult with sole state agent on establishment of evaluation criteria for vocational education programs. Fall of fiscal year 1992 and 1993.
7. Consult with the sole state agent on the establishment of technical committees in fiscal year 1992.
8. Fulfill duties as specified in the Carl D. Perkins Vocational and Applied Technology Act of 1990.

# ORGANIZATION CHART







5119

FIRE SERVICES TRAINING SCHOOL



# FIRE SERVICES TRAINING SCHOOL

	Fiscal 1990 Actual	Fiscal 1991 Appropriated	Fiscal 1992		Fiscal 1993	
			Base	Incrr/Deer Recommended	Base	Incrr/Deer Recommended
Full Time Equivalent Employees	5.00	5.00	.00	.00	.00	.00
Personal Services	166,691.87	172,084	0	0	0	0
Operating Expenses	56,363.05	72,720	0	0	0	0
Equipment	16,299.27	3,184	0	0	0	0
<b>Total Agency Costs</b>	<b>\$239,354.19</b>	<b>\$247,988</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
General Fund	220,257.92	219,055	0	0	0	0
Proprietary Fund	19,096.27	28,933	0	0	0	0
<b>Total Funding Costs</b>	<b>\$239,354.19</b>	<b>\$247,988</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Fire Services Training School	239,354.19	247,988	0	0	0	0
<b>Total Program Costs</b>	<b>\$239,354.19</b>	<b>\$247,988</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## MISSION AND GENERAL DESCRIPTION

It is the mission of the Fire Services Training School (FTS) to facilitate the education, training, and professional development of the fire service of Montana to meet or exceed the standards adopted by the Fire Service Training Advisory Council (whose members are appointed by the Board of Regents).

The Fire Services Training School serves all of Montana's fire departments, companies and districts. This audience consists of an estimated 7,600 personnel in 410 organizations; 95% of which are volunteers. The FSTS develops and operates programs which support and assist local government in their mission of providing quality fire and rescue service to the public. FTS supports and promotes: (a) "standard of care" operations; (b) self-sustained training programs within local organizations; (c) cooperation between organizations; (d) individual growth of emergency service personnel through their training; and (e) a wholesale approach at the State level to the delivery of training. As a result of language in the current appropriations bill,

FSTS is co-located with the Great Falls Vocational-Technical Center at 2100 16th Avenue South; Great Falls. FSTS operates a mobile smoke maze (tractor and trailer), a flammable liquids live fire fighting prop (trailer), one mobile command vehicle, and a resource center/loaning library. There are no dedicated fire training structures owned by the State. The FSTS Programs are taken to the

students through outreach.

## AGENCY ORGANIZATION

The Fire Services Training School works closely with its Advisory Council which is appointed by the Regents. The Council is very active in providing direction for the School's programs and its members are also involved in leadership roles with other organizations. The School's Staff includes a Director, Administrative Assistant, an Operations Chief, a Service Officer and a Support Officer. One staff member operates from Bozeman. The School's Director reports to the Assistant Dean of the Extension Service.

## AUTHORIZATION

**MCA 20-31-102. Fire services training school - creation - supervision by board of regents.** There is a fire services training school. The fire services training school is allocated to the board of regents for purposes of planning and coordination. The budget request for the fire services training school shall be submitted through the board of regents. The general supervision of the school is vested in the board of regents.

History: En. 75-7716 by Sec. 1, Ch. 104, L. 1977; R.C.M. 1947, 75-7716. MCA 20-31-103. **Purpose of school.** The purpose of the fire services training school is to:

- (1) provide fire service personnel with professional training;

- (2) identify new methods of fire prevention and suppression and disseminate information about them;
  - (3) provide a resource center for use by local fire services;
  - (4) provide testing and certification for personnel and apparatus; and
  - (5) coordinate fire services training in the state.
- History: En. 75-7717 by Sec. 2, Ch. 104, L. 1977: R.C.M. 1947, 75-7717; amd. Sec. 2, Ch. 6, L. 1987.

## GOALS AND PERFORMANCE INDICATORS

- To improve the operational effectiveness of local fire services.  
Number of local organizations using FSTS prescriptions services.  
number of active coaches and instructors.
- To provide a professional Certification Program based on national standards for fire service personnel.  
Percent of qualified applicants tested.  
Additional levels or specialties added or revised.  
Number of evaluation instruments developed or revised.

## Performance Indicators

Organizations using FSTS perscriptions/services  
Active coaches and instructors  
Percent of qualified instructors tested  
Levels or specialties added/revised  
Evaluation instruments developed/revised  
Exams developed after manual issue  
Percent of requesting applicants tested  
FF trained in smoke diving  
FF trained on flammable liquids & gases  
Courses delivered  
Individuals trained  
Contact hours  
Percent of library requests answered  
Items added to library  
Library items loaned  
Newsletters published  
Alerts published (not in newsletters)  
Hours of local fire training programs accredited  
Local fire training programs evaluated

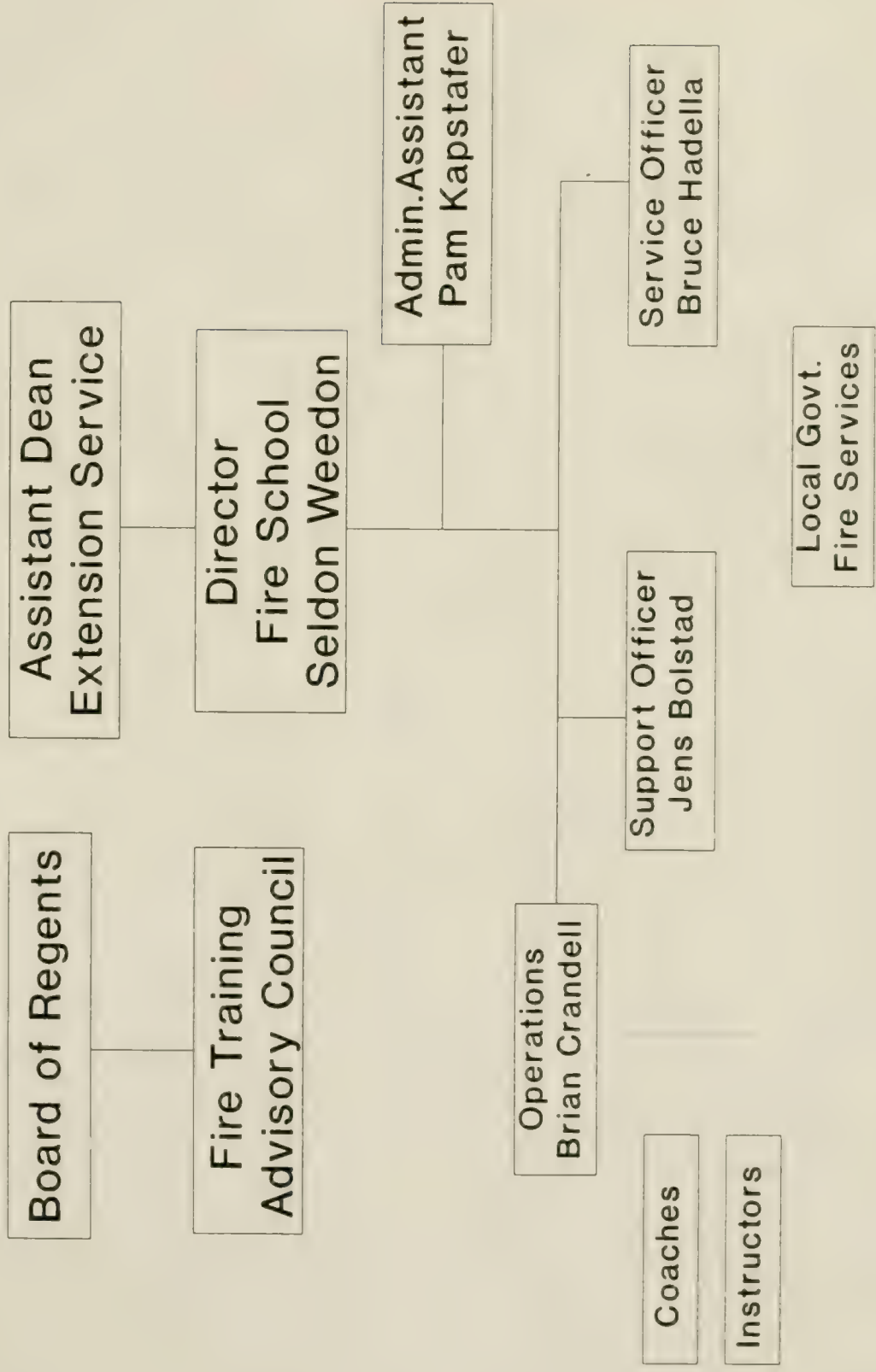
- To provide training courses for fire service personnel.  
Number of courses and individuals trained.  
Contact hours.
- To provide a central library, loan program and information exchange medium for local fire services.  
Percent of requests answered.  
Items added and loaned.  
Newsletters and alerts published.
- To provide accreditation for local fire training programs.  
Number of hours accredited.  
Number of programs evaluated.
- To provide a system of recognition for success in retaining contents of the International Fire Service Training Association Fire Training Manuals and other nationally recognized manuals and text.  
Exams developed after manual issue.  
Percent of requesting applicants tested.
- To provide facilities to support local fire services in their training programs.  
Train smoke divers annually.  
Train fire fighters on flammable liquids and gases.

## FY90 FY91 FY92 FY93 (Based on Current Level Funding)

200	200	200	200
30	30	30	30
53%	53%	53%	53%
1	1	1	1
6	6	6	6
NA	3	3	3
100%	100%	100%	100%
396	396	396	396
33	33	33	33
71	71	71	71
1719	1719	1719	1719
17609	17609	17609	17609
100%	100%	100%	100%
276	276	276	276
1790	1790	1790	1790
5831	5831	5831	5831
840	840	840	840
560	560	560	560
0	0	0	0



# FIRE SERVICE TRAINING SCHOOL











# STATE OF MONTANA

# Capital Construction Program



1992

—

1993





State of Montana  
Office of the Governor  
Helena, Montana 59620  
406-444-3111

STAN STEPHENS  
GOVERNOR

December 6, 1990

Members of the Fifty-Second Session  
of the Legislative Assembly  
State of Montana  
State Capitol Building  
Helena, MT 59620

Legislators:

I am pleased to present the requests of the state agencies for Capital Construction Projects, in accordance with Section 17-201-204, MCA, and Section 18-2-102, MCA. All the requests have been carefully reviewed and my recommendations for the program are included as part of the 1992-1993 Executive Budget.

The projects recommended in the Capital Construction Program for the next biennium focus on maintaining and developing existing state facilities. I endorse a bond program to aggressively address programmatic needs within our institutions and higher education system.

Sincerely,

A handwritten signature in black ink, appearing to read "Stan Stephens".

STAN STEPHENS  
Governor





DEPARTMENT OF ADMINISTRATION

DIRECTOR'S OFFICE



STAN STEPHENS, GOVERNOR

MITCHELL BUILDING

STATE OF MONTANA

(406) 444-2032

HELENA, MONTANA 59620

December 6, 1990

Honorable Stan Stephens  
Governor  
State of Montana  
State Capitol Building  
Helena, Montana 59620

Dear Governor Stephens:

In accordance with Section 17-7-201 through 17-7-204 and Section 18-2-102, MCA we submit the agency requests for the Capital Construction Program for the 1992-1993 Biennium.

The Facility Planning Bureau of the Architecture & Engineering Division has solicited the needs of all State institutions, university system and agencies. We reviewed all facility requests and we recommend this Capital Construction Program for inclusion in your Executive Budget as described in the following pages.

Sincerely,

A handwritten signature in dark ink, appearing to read "Thomas B. O'Connell".

THOMAS B. O'CONNELL, Administrator  
Architecture & Engineering Division

A handwritten signature in dark ink, appearing to read "Dave Ashley".

DAVE ASHLEY, Acting Director  
Department of Administration



## TABLE OF CONTENTS

	<u>Page</u>
CAPITAL CONSTRUCTION PROGRAM PROPOSAL	1
Priority Listing	3
Project Description by Agency	13
Project Request Forms	35
Bonded Program	173
BUILDING PROGRAM REQUESTS 1992 - 1993	191
Departments and Agencies	193
Department of Institutions	276
Montana University System	256
1994 - 1995 L.R.B.P. Requests	305
1996 - 1997 L.R.B.P. Requests	317
CAMPUS SITE PLANS	327

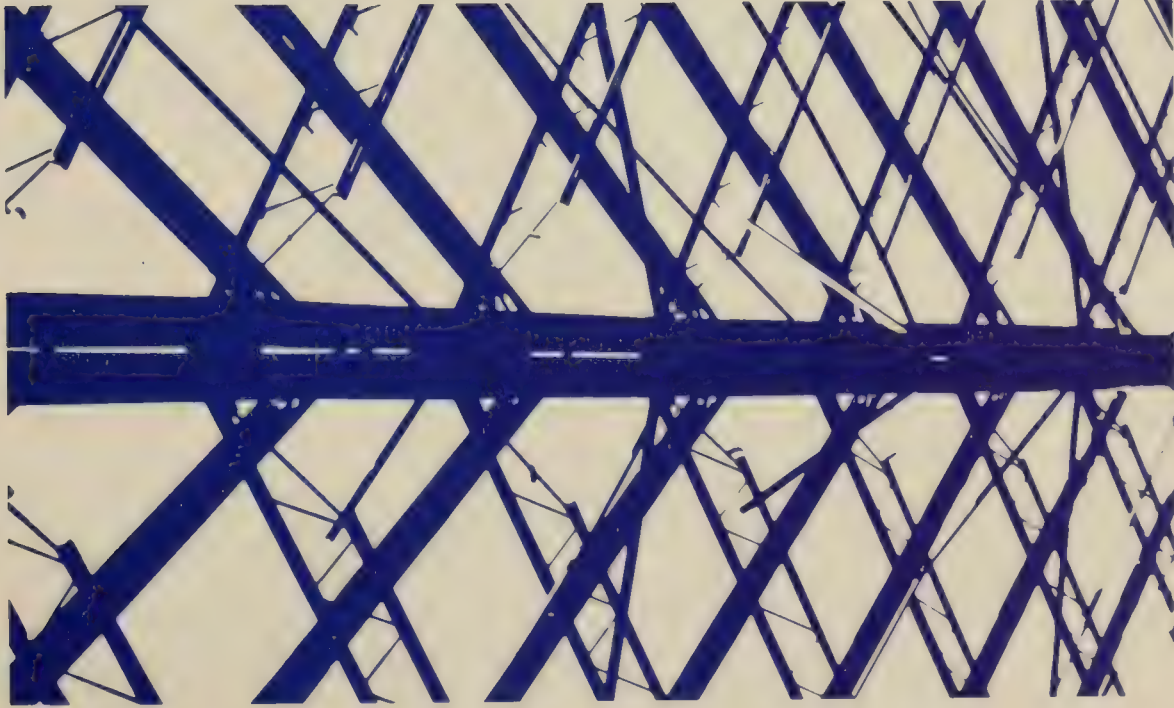
### BUILDING PROGRAM REQUESTS 1992-1993

#### INDEX

Summary by Agency	192
Administration, Department of	194
Commerce, Department of	198
Education, Department of	198
Family Services, Department of	204
Fish, Wildlife & Parks, Department of	206
Highways, Department of	209
Institutions, Department of	226
Justice, Department of	211
Labor and Industry, Department of	212
Lands, Department of State	212
Military Affairs, Department of	216
Public Instruction, Office of	224
University System, Montana	256







# Capital Construction Program Proposal



## LONG RANGE BUILDING PROGRAM

1992-1993 Biennium

---

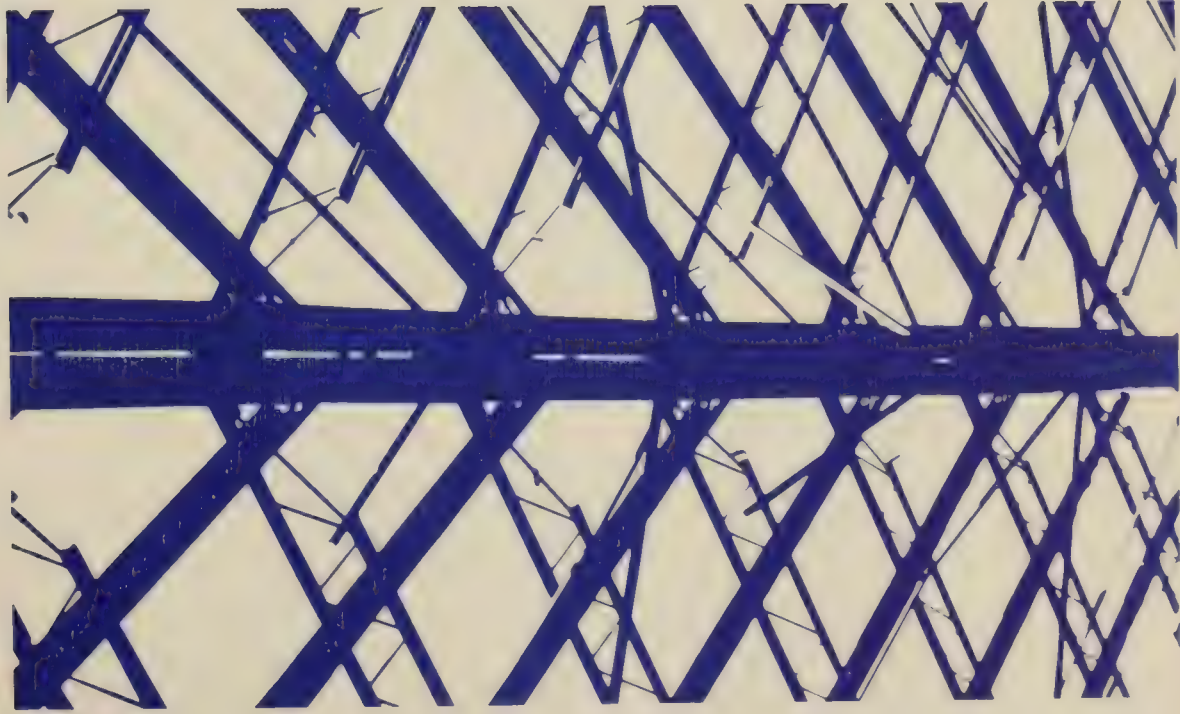
The Long Range Building Program was initiated in 1965 to provide funding to construct and maintain all State Buildings. In recent years, the building program has been funded from both current (cash) revenues and general obligation bonds derived from dedicated portions of the cigarette tax and the general fund. The program is supplemented from other funding sources such as earmarked revenue, federal and private revenue and the University System plant funds.

The Long Range Building Program for the 1992-1993 biennium will utilize the earmarked cigarette tax to carry out a needed effort to repair and improve existing facilities. This building program will also provide the Legislature the opportunity to authorize the sale of Long Range Building Bonds for construction of several projects for the Department of Fish, Wildlife & Parks. The following pages of the Capital Construction Program contain a priority listing of recommended projects with a brief description of each project and estimated costs.

The Capital Construction Program, 1992-1993, is a publication by the Department of Administration, Architecture and Engineering Division, and is considered a part of the Executive Budget. Additional information on all of the projects is available through the Department of Administration.







# Priority Listing



# PRIORITY LISTING

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
1.	Primary Electrical Vault Disconnect, Eastern Montana College	05007 34313	\$31,000			\$14,000	\$45,000
2.	Install Fire Alarm System, University of Montana	05007	\$70,000				\$70,000
3.	Expand Security Fence, Pine Hills School	05007	\$27,000				\$27,000
4.	Hazardous Material Abatement, Statewide	05007 Plant Funds	\$650,000			\$150,000	\$800,000
5.	Replace Water and Steam Lines, Montana Development Center	05007	\$149,208				\$149,208
6.	Replace and Improve Roofs, University System	05007 72310	\$1,089,550			\$350,000	\$1,439,550
7.	Replace and Repair Roofs, Family Service	05007	\$127,600				\$127,600
8.	Replace Academic Building Roof & Misc Repairs, Montana School for Deaf & Blind	05007	\$339,000				\$339,000
9.	Replace Roofs, Institutions	05007	\$30,000				\$30,000

# PRIORITY LISTING

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
9.	Replace Roofs, Institutions	05007	\$30,000				\$30,000
10.	Construction Litigation, Architecture & Engineering	05007	\$345,000				\$345,000
11.	Maintenance & Improvement Projects, Statewide, Department of State Lands	05007 03068	\$118,280		\$100,000		\$218,280
12.	Moisture Protection, Eastmont Human Services Center	05007	\$98,450				\$98,450
13.	Improve Underground Utilities Phase I, University System	05007 72201	\$296,000			\$200,000	\$496,000
14.	Maintain Roads & Parking Lots, Institutions	05007	\$150,000				\$150,000
15.	Seal Buildings, Montana State Prison	05007	\$25,000				\$25,000
16.	Repair & Improve Heating System, Western Montana College	05007	\$57,900				\$57,900
17.	Improve Handicapped Access, University System	05007	\$335,000				\$335,000
18.	Replace Carpet, Great Falls	05007	\$60,000				\$60,000



# PRIORITY LISTING

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
Vo-Tech							
19.	Kitchen Upgrade, Statewide, Military	05007	\$45,000				\$45,000
20.	Building Improvements, Center for the Aged	05007	\$105,015				\$105,015
21.	Improve Sidewalks & Fire Access, University System	05007	\$86,000				\$86,000
22.	Replace Multi-Purpose Building Flooring, Montana State Hospital	05007	\$26,800				\$26,800
23.	Preliminary Design for Prison Expansion, Montana State Prison	05007	\$877,500				\$877,500
24.	Construct Unit Office, Plains, Department of State Lands	05007	\$235,000				\$235,000
25.	Rifle Range Rehabilitation, Statewide, Military Affairs	05007 05009	\$10,000		\$555,000		\$565,000
26.	Plan Chemistry/Pharmacy Renovations & Life Sciences Building, University of Montana	05007	\$50,000		\$50,000	\$150,000	\$250,000

# PRIORITY LISTING

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
27.	Plan Metallurgy Remodel, Montana Tech	05007	\$50,000				\$50,000
28.	Preliminary Design, University System	05007	\$1,841,635				\$1,241,635
29.	Armory Additions & Alterations, Statewide, Military Affairs	05007 05009	\$150,000		\$16,155,000		\$16,305,000
30.	Acquire Land & Preplan Armory, Billings, Military Affairs	05007 05009	\$150,000		\$200,000		\$350,000
31.	Expand Military Vehicle Compounds, Statewide, Military Affairs	05007 05009	\$5,000		\$275,000		\$280,000
32.	Develop Alternate Water Supply, Capitol Complex, Administration	06528				\$50,000	\$50,000
33.	Property Acquisition & Development, Administration	05008				\$123,014	\$123,014
34.	Improve Pavement and Lighting, Yellowstone Airport	06007 03068			\$465,957	\$51,773	\$517,730
35.	Remove Underground Storage	02409		\$150,000			\$150,000

# PRIORITY LISTING

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
	Tanks, Statewide, FW&P						
36.	Headquarters Maintenance and Improvements, Statewide, FW&P	02409		\$85,000			\$85,000
37.	Department Property Development FW&P	02410		\$360,000			\$360,000
38.	State Park Maintenance and Development, Statewide, FW&P	02051 02409 02410 02411 02422 02981 03097 03098		\$3,798,500	\$1,124,500		\$4,923,000
39.	Fish Hatchery Maintenance, Statewide, FW&P	02409 03097		\$37,500	\$112,500		\$150,000
40.	Fishing Access Site Improvements, Statewide, FW&P	02409 03097		\$286,000	\$858,000		\$1,144,000
41.	Motorboat Access Facilities, Statewide, FW&P	02409 03097		\$67,000	\$201,000		\$268,000
42.	River Restoration, Statewide	02149		\$261,000			\$261,000

## PRIORITY LISTING

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
43.	Fishing Access Site Acquisition, Statewide, FW&P	02415		\$881,000			\$881,000
44.	Wildlife Habitat Maintenance, Statewide, FW&P	02406		\$304,000			\$304,000
45.	Wildlife Habitat Acquisition, Statewide, FW&P	02114		\$4,923,356			\$4,923,356
46.	Waterfowl Habitat Enhancement, Statewide, FW&P	02085		\$399,500			\$399,500
47.	Bighorn Sheep Habitat Acquisition, Statewide, FW&P	02086		\$48,500			\$48,500
48.	Maintenance Projects, Statewide, Highways	02422		\$443,500			\$443,500
49.	Construct & Expand Maintenance Buildings, Statewide, Highways	02422		\$715,000			\$715,000
50.	Equipment Storage Buildings, Statewide, Highways	02422		\$568,525			\$568,525
51.	Renovate & Expand Job Service, Great Falls	03128			\$310,000		\$310,000



# PRIORITY LISTING

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
52.	Construct 2 Greenhouses, Missoula, DSL	02449 02031		\$191,900			\$191,900
53.	Federal Spending Authority, Military	05009			\$300,000		\$300,000
54.	Expand Industries Facilities, Montana State Prison	06533 06534 03057			\$14,000	\$321,976	\$335,976
55.	Various Improvements, University of Montana	73100				\$2,584,600	\$2,584,600
56.	Remodel Student Union Building, Western Montana College	71601				\$600,000	\$600,000
TOTAL CASH PROJECTS			\$7,630,938	\$13,520,281	\$20,720,957	\$4,595,363	\$46,467,539

PRIORITY LISTING

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH BONDED DEBT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	L.R.B.F.	FUNDING SOURCE			TOTAL
				State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
BONDED PROGRAM							
57.	Major Expansion, Montana Montana State Prison	GOB	\$19,360,745				\$19,360,745
58.	Construct Engineering/Physical Sciences Complex, Montana State University	GOB Donations	\$17,734,460			\$3,335,250	\$21,069,710
59.	Construct Business Admin Building, University of Montana	GOB Donations	\$12,558,395			\$2,322,900	\$14,881,295
60.	Construct Gymnasium, Northern Montana College					\$8,000,000	\$8,000,000
61.	Renovate Apsaruke Hall, Eastern Montana College	GOB	\$1,228,360				\$1,228,360
TOTAL BONDED PROGRAM				\$50,881,960		\$13,658,150	\$64,540,110

PRIORITY LISTING

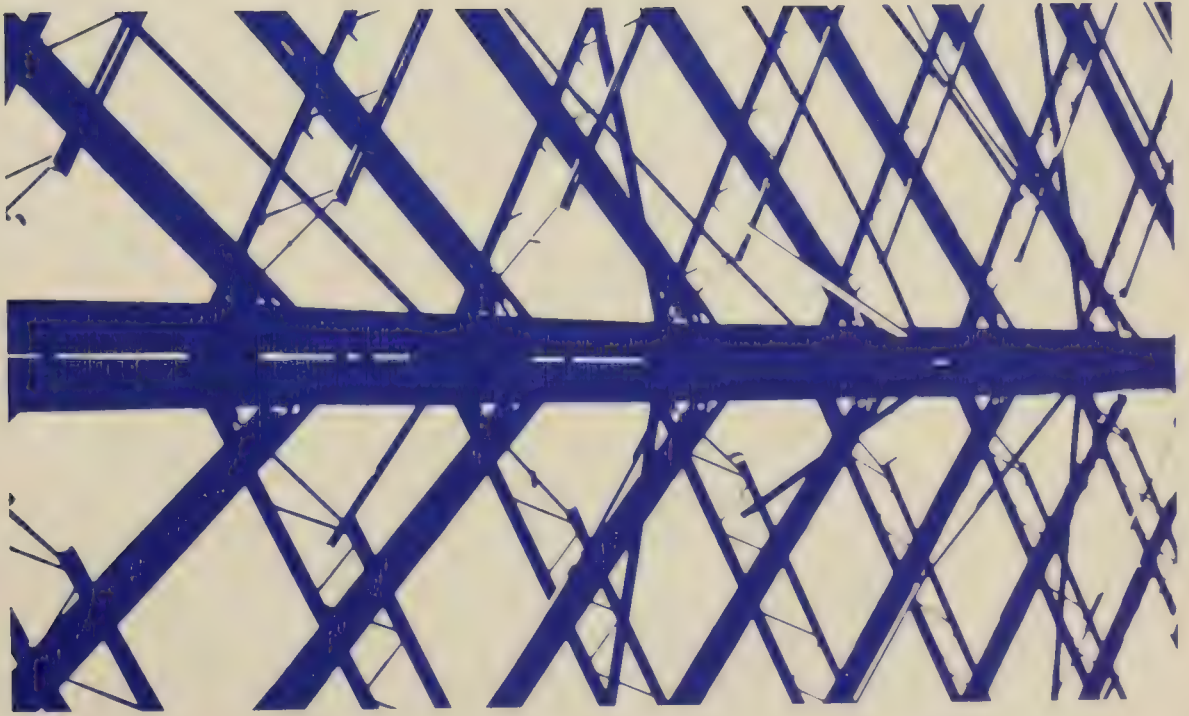
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH BONDED DEBT  
1992 - 1993 BIENNium

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
TOTAL			\$58,512,898	\$13,520,281	\$20,720,957	\$18,253,513	\$111,007,649





# Project Description by Agency





PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF ADMINISTRATION							
4.	HAZARDOUS MATERIAL ABATEMENT, STATEWIDE Identify and remove or encapsulate hazardous materials; project includes underground storage tanks, at State owned facilities.	05007 Plant Funds	\$650,000			\$150,000	\$800,000
10.	CONSTRUCTION LITIGATION, ARCHITECTURE & ENGINEERING DIVISION Designate specific funds for the Architecture and Engineering Division to procure legal assistance in construction dispute resolution.	05007	\$345,000				\$345,000
32.	DEVELOP ALTERNATE WATER SUPPLY, CAPITOL COMPLEX Develop wells and implement conservation measures within the Capitol Complex to reduce the dependency on City of Helena water supply.	06528				\$50,000	\$50,000

PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
33.	PROPERTY ACQUISITION & DEVELOPMENT, CAPITOL COMPLEX Develop minimal land purchase account, and repair and maintain paved areas in Capitol Complex area.	05008				\$123,014	\$123,014
<hr/>							
TOTAL - Department of Administration			\$995,0000	\$0	\$0	\$323,014	\$1,318,014
<hr/>							
DEPARTMENT OF COMMERCE							
34.	IMPROVE PAVEMENT AND LIGHTING, YELLOWSTONE AIRPORT Repave asphalt areas to prevent further deterioration and install Federally required signs and lights.	06007 03068			\$465,957	\$51,773	\$517,730
<hr/>							
TOTAL - Department of Commerce			\$0	\$0	\$465,957	\$51,773	\$517,730
<hr/>							



PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF EDUCATION							
8.	REPLACE ACADEMIC BUILDING ROOF & MISC REPAIRS, MONTANA SCHOOL FOR THE DEAF & BLIND Replace roof and make miscellaneous repairs to prevent further damage to the structure and its contents.	05007	\$339,000				\$339,000
TOTAL - Department of Education			\$339,000	\$0	\$0	\$0	\$339,000
DEPARTMENT OF FAMILY SERVICES							
3.	EXPAND SECURITY FENCE, PINE HILLS SCHOOL Expand fenced area to improve security.	05007	\$27,000				\$27,000

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				Other Funds	TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds			
7.	REPLACE & REPAIR ROOFS, MOUNTAIN VIEW SCHOOL AND PINE HILLS SCHOOL Replace and repair roofs to prevent leakage and further damage to the structure and contents.	05007	\$127,600					\$127,600
TOTAL - Department of Family Services								
			\$154,600	\$0	\$0		\$0	\$154,600
DEPARTMENT OF FISH, WILDLIFE AND PARKS								
35.	REMOVE UNDERGROUND STORAGE TANKS, STATEWIDE Remove, inspect and test underground storage tanks statewide to comply with state and federal laws.	02409		\$150,000				\$150,000

PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
36.	HEADQUARTERS MAINTENANCE AND IMPROVEMENTS, STATEWIDE Maintain and improve facilities to prevent deterioration and increase handicapped accessibility.	02409	\$85,000				\$85,000
37.	DEPARTMENT PROPERTY DEVELOPMENT Maintain and develop sites statewide to protect from deterioration and to better serve the public.	02410	\$360,000				\$360,000
38.	STATE PARK MAINTENANCE AND DEVELOPMENT, STATEWIDE Maintain and develop sites statewide to protect from deterioration and to better serve the public.	02051 02409 02410 02411 02422 02981 03097 03098	\$3,798,500	\$1,124,500			\$4,923,000
39.	FISH HATCHERY MAINTENANCE, STATEWIDE Maintain fish hatcheries statewide to improve facilities and prevent deterioration.	02409 03097	\$37,500	\$112,500			\$150,000

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
40.	FISHING ACCESS SITE IMPROVEMENTS, STATEWIDE Improve fishing access sites to protect property investment and the environment of the sites.	02409 03097		\$286,000	\$858,000		\$1,144,000
41.	MOTORBOAT ACCESS FACILITIES, STATEWIDE Provide boat access and facilities statewide to better serve the public.	02409 03097		\$67,000	\$201,000		\$268,000
42.	RIVER RESTORATION, STATEWIDE Improve rivers statewide to provide enhanced fish habitat.	02149		\$261,000			\$261,000
43.	FISHING ACCESS SITE ACQUISITION, STATEWIDE Acquire property to provide sites statewide for fishing access and recreation.	02415		\$881,000			\$881,000
44.	WILDLIFE HABITAT MAINTENANCE, STATEWIDE Maintain wildlife habitat sites to protect property investment and the environment of the sites.	02406		\$304,000			\$304,000



PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
45.	WILDLIFE HABITAT ACQUISITION, STATEWIDE Acquire land to reduce land use conflicts and maintain wildlife populations.	02114		\$4,923,356			\$4,923,356
46.	WATERFOWL HABITAT ENHANCEMENT, STATEWIDE Construct additional waterfowl habitat and provide improvements to existing habitat to help increase Montana waterfowl production.	02085		\$399,500			\$399,500
47.	BIGHORN SHEEP HABITAT ACQUISITION, STATEWIDE Acquire additional habitat for Bighorn sheep to provide for future expansion of sheep populations.	02086		\$48,500			\$48,500
TOTAL- Fish, Wildlife and Parks			\$0	\$11,601,356	\$2,296,000	\$0	\$13,897,356

PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF HIGHWAYS							
48.	MAINTENANCE PROJECTS, STATEWIDE Provide improvements and repairs to existing facilities statewide.	02422		\$443,500			\$443,500
49.	CONSTRUCT & EXPAND MAINTENANCE BUILDINGS Construct and/or expand Maintenance Buildings at Billings, Whitefish and Helena.	02422		\$715,000			\$715,000
50.	EQUIPMENT STORAGE BUILDINGS, STATEWIDE Construct new Equipment Storage Buildings at Great Falls, Rainy Lake, Plentywood, Lost Trail Pass and Lincoln to provide adequate storage for equipment.	02422		\$568,525			\$568,525
TOTAL- Department of Highways			\$0	\$1,727,025	\$0	\$0	\$1,727,025

PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

FUNDING SOURCE

Priority	Agency/Project	Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	TOTAL
DEPARTMENT OF INSTITUTIONS							
5.	REPLACE WATER AND STEAM LINES, MONTANA DEVELOPMENTAL CENTER Install new water lines to replace eroded steel pipes and to eliminate lead contamination of drinking water. Replace steam lines to reduce damage from leaks and conserve energy.	05007	\$149,208				\$149,208
9.	REPLACE ROOFS, BOARD OF PARDONS & PRISON WAREHOUSES Replace roofs to prevent leakage and future damage to structure and contents thereof.	05007	\$30,000				\$30,000
12.	MOISTURE PROTECTION, EASTMONT HUMAN SERVICES CENTER Install subdrainage system in Cottage 1 and the Multipurpose building. Repair or replace the Multipurpose building roof to prevent leakage and future damage to structure and contents thereof.	05007	\$98,450				\$98,450

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
14.	MAINTAIN ROADS AND PARKING LOTS, STATEWIDE Patch, chipseal and/or resurface existing pavement to prevent continuing deterioration.	05007	\$150,000				\$150,000
15.	SEAL BUILDINGS, MONTANA STATE PRISON Apply an exterior finish to the buildings built in the last major expansion to prevent concrete deterioration.	05007	\$25,000				\$25,000
20.	BUILDING IMPROVEMENTS, MONTANA CENTER FOR THE AGED Replace floor tile and exterior doors to create a safer, more energy efficient facility. Relocate walk-in freezer and cooler to allow reorganization of the kitchen work area.	06007	\$105,015				\$105,015
22.	REPLACE MULTIPURPOSE BUILDING FLOORING, MONTANA STATE HOSPITAL Replace outdated flooring to improve safety and aesthetics of the building.	05007	\$26,800				\$26,800



PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
23.	PRELIMINARY DESIGN FOR PRISON EXPANSION, MONTANA STATE PRISON Prepare the preliminary design for a major expansion of the Montana State Prison at Deerlodge, including site survey, soils tests, codes review and design fees.	05007	\$877,500				\$877,500
54.	EXPAND INDUSTRIES FACILITIES, MONTANA STATE PRISON Expand the Industries Facility to enable a larger percentage of the prison population to participate in vocational training.	06533 06534 03057			\$14,000	\$321,976	\$335,976
TOTAL - Department of Institutions			\$1,461,973	\$0	\$14,000	\$321,976	\$1,797,949

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNIIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF LABOR AND INDUSTRY							
51.	RENOVATE AND EXPAND JOB SERVICE, GREAT FALLS Construct an addition to accommodate programs and vacate structurally deficient basement.	03128			\$310,000		\$310,000
TOTAL - Department of Labor and Industry							
			\$0	\$0	\$310,000	\$0	\$310,000
DEPARTMENT OF STATE LANDS							
11.	MAINTENANCE & IMPROVEMENT PROJECTS, STATEWIDE Provide improvements and repairs to existing facilities statewide.	05007 03068	\$118,280		\$100,000		\$218,280
24.	CONSTRUCT UNIT OFFICE, PLAINS Construct new office/dispatch facility to replace existing deteriorated mobile home.	05007	\$235,000				\$235,000

PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
52.	CONSTRUCT 2 GREENHOUSES, MISSOULA Construct 2 new greenhouses to produce sufficient seedlings to meet reforestation and conservation needs.	02449 02031		\$191,900			\$191,900
TOTAL - Department of State Lands							
			\$353,280	\$191,900	\$100,000	\$0	\$645,180
DEPARTMENT OF MILITARY AFFAIRS							
19.	KITCHEN UPGRADE, STATEWIDE Upgrade existing, unusable kitchens to bring into compliance with codes.	05007	\$45,000				\$45,000
25.	RIFLE RANGE REHABILITATION, STATEWIDE Rehabilitate existing rifle ranges to comply with current military health and safety requirements.	05007 05009	\$10,000		\$555,000		\$565,000

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
29.	ARMORY ADDITIONS AND ALTERATIONS, STATEWIDE Expand and alter existing armory buildings to provide adequate space for the armories functions.	05007 05009	\$150,000		\$16,155,000		\$16,305,000
30.	ACQUIRE LAND AND PREPLAN ARMORY, BILLINGS Acquire land and construct a new building to provide adequate space for armory functions.	05007 05009	\$150,000		\$200,000		\$350,000
31.	EXPAND MILITARY VEHICLE COMPOUNDS, STATEWIDE Expand existing vehicle compounds to provide sufficient storage.	05007 05009	\$5,000		\$275,000		\$280,000
53.	FEDERAL SPENDING AUTHORITY Provide Department of Military Affairs with authority to utilize Federal Funds.	05009			\$300,000		\$300,000
TOTAL- Department of Military Affairs			\$360,000	\$0	\$17,485,000	\$0	\$17,845,000



PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	Accounting Entity	L.R.B.F.	FUNDING SOURCE			TOTAL
				State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
MONTANA UNIVERSITY SYSTEM							
1.	PRIMARY ELECTRICAL VAULT DISCONNECT, EASTERN MONTANA COLLEGE Install primary vault switch to allow exterior power disconnect and to improve safety conditions.	05007 07037	\$31,000			\$14,000	\$45,000
2.	INSTALL FIRE ALARM SYSTEM, UNIVERSITY OF MONTANA Install fire alarm system to improve safety conditions for faculty and students.	05007	\$70,000				\$70,000
6.	REPLACE AND IMPROVE ROOFS, UNIVERSITY SYSTEM Replace roof on buildings statewide to prevent leakage and to avoid future water damage to structure and contents.	05007 72310	\$1,089,550			\$350,000	\$1,439,550
13.	IMPROVE UNDERGROUND UTILITIES, PHASE I, UNIVERSITY SYSTEM Upgrade deteriorated underground utility systems to provide reliable delivery of utilities.	05007 72201	\$296,000			\$200,000	\$496,000

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH CURRENT REVENUES 1992 - 1993 BIENNium

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
16.	REPAIR & IMPROVE HEATING SYSTEM, WESTERN MONTANA COLLEGE Install emergency backup system and repair existing system to assure emergency operational capabilities.	05007	\$57,900				\$57,900
17.	IMPROVE HANDICAPPED ACCESS, UNIVERSITY SYSTEM Provide modifications to make programs accessible to the mobility impaired.	05007	\$335,000				\$335,000
18.	REPLACE CARPET, GREAT FALLS VO-TECH Replace deteriorated carpet to improve aesthetics and safety conditions.	05007	\$60,000				\$60,000
21.	IMPROVE SIDEWALKS AND FIRE ACCESS, UNIVESITY SYSTEM Replace sidewalks and renovate fire fighting access routes to improve public safety.	05007	\$86,000				\$86,000

PROJECT DESCRIPTION BY AGENCY  
CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
26.	PLAN CHEMISTRY/PHARMACY RENOVATIONS & LIFE SCIENCE BUILDING, UNIVERSITY OF MONTANA Prepare the construction documents for the Chemistry/Pharmacy Building renovations and plan the consolidation of the Life Sciences Department.	05007 32101 3216x	\$50,000		\$50,000	\$150,000	\$250,000
27.	PLAN METALLURGY REMODEL MONTANA TECH Renovate existing facility to provide adequate student/facility space; update utilities and labs and improve safety.	05007	\$50,000				\$50,000
28.	PRELIMINARY DESIGN, UNIVERSITY SYSTEM Develop Engineering/Physical Sciences Building, Business Administration Building & Remodel Asparuke Hall through construction documents.	05007	\$1,841,635				\$1,841,635
55.	VARIOUS IMPROVEMENTS, UNIVERSITY OF MONTANA Provide a number of improvements throughout the Missoula Campus	71100 72100 72105 73100 32101 32163 33183				\$2,584,600	\$2,584,600

PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH CURRENT REVENUES  
1992 - 1993 BIENNIUM

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
56.	REMODEL STUDENT UNION BUILDING, WESTERN MONTANA COLLEGE Renovate and expand Student Union Building to accommodate current student needs.	71601				\$600,000	\$600,000
TOTAL - MONTANA UNIVERSITY SYSTEM							
			\$3,967,085	\$0	\$50,000	\$3,898,000	\$7,915,685
TOTAL FUNDED WITH CURRENT REVENUES							
			\$7,630,938	\$13,520,281	\$20,720,957	\$4,595,363	\$46,467,539



PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH BONDED DEBT  
1992 - 1993 BIENNium

Priority	Agency/Project	Accounting Entity	FUNDING SOURCE				TOTAL
			L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF INSTITUTIONS							
57.	MAJOR EXPANSION, MONTANA STATE PRISON Expand High/Close Security Housing and support facilities to accommodate expanding population.	GOB	\$19,360,745				\$19,360,745
TOTAL - Department of Institutions							
			\$19,360,745	\$0	\$0	\$0	\$19,360,745
MONTANA UNIVERSITY SYSTEM							
58.	CONSTRUCT ENGINERING/ PHYSICAL SCIENCES BUILDING Build new facilities and renovate existing to provide adequate laboratory and classroom space for the engineering and physical sciences programs.	GOB Donations	\$17,734,460			\$3,335,250	\$21,069,710

# PROJECT DESCRIPTION BY AGENCY

## CAPITAL CONSTRUCTION PROGRAM PROPOSAL FUNDED WITH BONDED DEBT 1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
59.	BUSINESS ADMINISTRATION BUILDING, U OF M Construct a new School of Business building to replace existing inadequate facilities and consolidate the program.	GOB 32101	\$12,558,395			\$2,322,900	\$14,881,295
60.	CONSTRUCT GYMNASIUM, NORTHERN MONTANA COLLEGE Construct new gymnasium to replace obsolete existing Gym and to provide adequate room for instructional and recreational activities.					\$8,000,000	\$8,000,000
61.	RENOVATE APSARUKE HALL, EASTERN MONTANA COLLEGE Renovate dormitory to relieve overcrowding in academic and administrative areas.	GOB	\$1,228,360				\$1,228,360
TOTAL - Montana University System			\$31,521,215	\$0	\$0	\$13,658,150	\$45,179,365

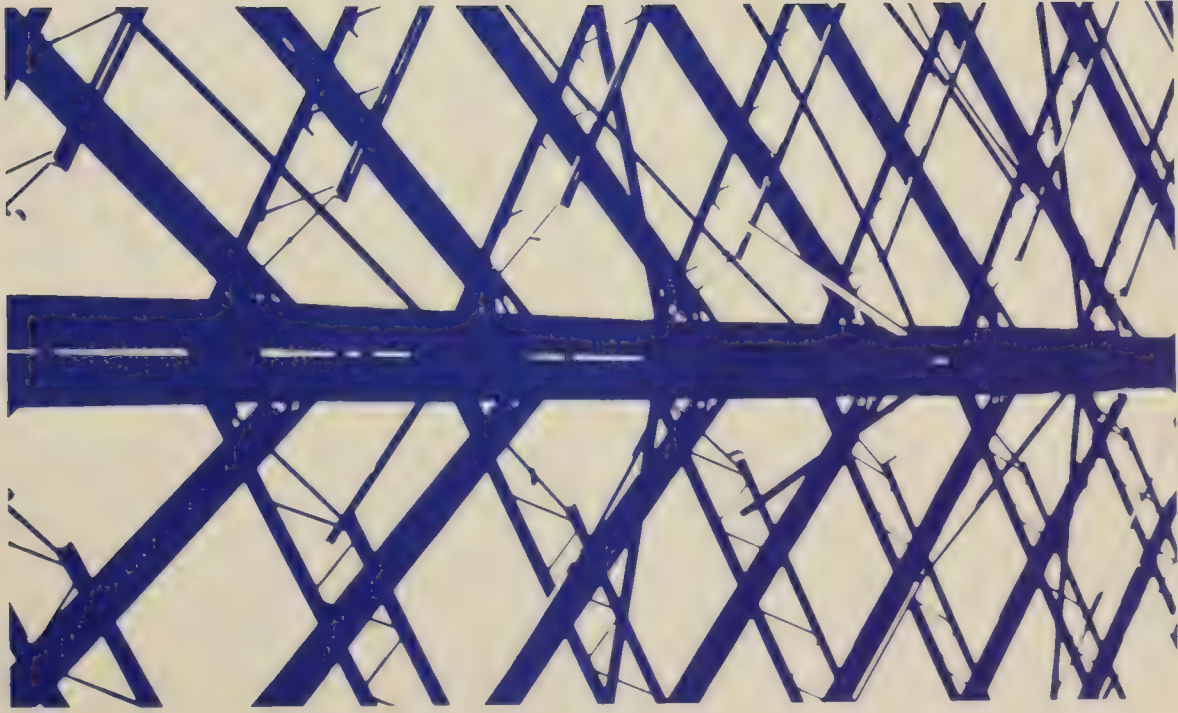
PROJECT DESCRIPTION BY AGENCY

CAPITAL CONSTRUCTION PROGRAM PROPOSAL  
FUNDED WITH BONDED DEBT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE					TOTAL
		Accounting Entity	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
TOTAL FUNDED WITH BONDED DEBT							
			\$50,881,960	\$0	\$0	\$13,658,150	\$64,540,110
TOTAL LONG RANGE BUILDING PROGRAM							
			\$58,512,898	\$13,520,281	\$20,720,957	\$18,253,513	\$111,007,649







# Project Request Forms



Project Title Primary Electrical Vault Disconnect  
Project Priority 1  
Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program Eastern Montana College

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Improves safety of existing facilities

B. LOCATION: Rimrock Hall Electrical Vault

(Check where appropriate)

- ☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will install an exterior, pad mounted disconnect switch to allow power in vault to be shut off before workers enter vault. Project will also relocate 3 meters so vault does not have to be entered to take monthly reading.

Impact on Existing Facilities:

Eliminates high hazard exposure.

Number to be served by Facility: Entire Campus

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Currently disconnect switch is in far corner of primary electrical transformer vault. The proximity of the bare high voltage buss bars in the room make it a very dangerous area for workers to enter.

E. ALTERNATIVES CONSIDERED:

1. Continue to expose workers to high voltage exposure.
2. Do work as described.
3. Convert campus from 4 KV system to 13 KV system.

Rationale for Selection of a Particular Alternative:

Alternate #2 relieves the college of the liability of having workers in a dangerous place. Current electrical capacity is adequate to meet needs of campus until Special Education Tower is constructed.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Con'eer Engineering Inc.

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 4,300

5. Utilities: \$ 33,000

6. Landscaping & Site Development: \$ 3,000

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 4,700

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ \_\_\_\_\_

Less other funds available

Source 34313 \$ 14,000

Long Range Building Fund \$ 21,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: August, 1992

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Install Fire Alarm System  
 Project Priority 2  
 Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program University of Montana

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility      ☐ Major Maintenance Class  
☐ Improves an Existing Facility      ☐ Replaces Existing Facility  
☒ Other Improves safety of existing facilities

B. LOCATION: Continuing Ed., Fine Arts, Rankin Hall,  
Schreiber Gym & Botany Annex, Missoula  
 (Check where appropriate)

- ☒ Site on Owned Property      ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected      ☒ Utilities Already Available  
☒ Site Already Selected      ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

Install fire alarm in five buildings and connect systems in various buildings to BCC (Buildings Central Computer).

Impact on Existing Facilities:

The project will reduce the risk of loss of life and property due to fire code violations.

Number to be served by Facility: Faculty & Students

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Violation of Health and Safety codes jeopardizes the safety of students, faculty, staff and visitors. Projects have been recommended by State Fire Marshall.

E. ALTERNATIVES CONSIDERED:

1. Continue with problem in current situation.
2. Partially fund project.
3. Completely fund project.

Rationale for Selection of a Particular Alternative:

Alternate #2 represents reduction from original request of \$345,000. Portions of request were considered less critical than recommended projects.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: UM Facilities Services

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other:	\$	
3. Construction Cost	\$	53,600
4. Architectural/Engineering Fees:	\$	8,640
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	6,900
9. Other: <u>Legal, Admin., Codes</u>	\$	860
	\$	
TOTAL COST	\$	70,000
Less other funds available		
Source	\$	0
	\$	
Long Range Building Fund	\$	70,000*

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: September, 1993

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services

\$

Operating Expenses

\$

Maintenance Expenses

\$

2. SECOND BIENNIUM ( N/A )

Personnel Services

\$

Operating Expenses

\$

Maintenance Expenses

\$

3. THIRD BIENNIUM ( N/A )

Personnel Services

\$

Operating Expenses

\$

Maintenance Expenses

\$

\*See Rationale for Selection of a Particular  
Alternative.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Expand Security Fence  
Project Priority 3  
Biennium 1992 - 1993

Department FAMILY SERVICES  
Agency/Program Pine Hills School

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Range Rider & Russell Lodges, Pine Hills  
School, Miles City

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will expand the existing 12' fenced security compound behind Range Rider to connect to the building. It will also create a secure area between Russell Lodge and the gymnasium. This will involve relocating an existing parking area for 16 vehicles.

Impact on Existing Facilities:

This project improves security to the existing facility which houses with high risk classifications & juvenile sex offenders.

Number to be served by Facility: 48 residents

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Range Rider Lodge houses residents considered high security risks. The building has windows and a fire exit that allow egress to an unsecured area. The passage between Russell Lodge and the gymnasium creates an avenue for flight through an unsupervised passageway.

E. ALTERNATIVES CONSIDERED:

1. Fence total campus.
2. Provide high security features in buildings to prevent egress.
3. Install fence to secure areas outside of high risk housing units.
4. Complete only work on Range Rider.

Rationale for Selection of a Particular Alternative:

Alternate #3 was selected because installation of a 12' security fence will discourage escapes, as well as contain residents in the event building evacuation is necessary. Fence construction costs less than architectural hardening of the building perimeter. Original request of \$5,000 did not include Russell Lodge portion of work.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other:	\$	
3. Construction Cost	\$	24,545
4. Architectural/Engineering Fees:	\$	
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	2,455
9. Other:	\$	
	\$	
TOTAL COST	\$	27,000
Less other funds available		
Source	\$	0
	\$	
Long Range Building Fund	\$	27,000*

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: July, 1991	
Number of Additional Personnel Required: None	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$

\* See Rationale for Selection of a Particular Alternative.



Project Title Hazardous Material Abatement  
Project Priority 4  
Biennium 1992 - 1993

Department ADMINISTRATION  
Agency/Program Architecture and Engineering

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Improve safety of existing facilities

B. LOCATION: Statewide

- (Check where appropriate)  
☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will address underground tank compliance with EPA regulations. Removal/Replacement of existing tanks will be accomplished on a priority basis, per location/condition/age, etc. Additional funds will allow continued abatement of asbestos and other hazardous materials which pose a threat to building occupants and the environment.

Impact on Existing Facilities:

Bring underground tanks in to compliance with Health Department requirements, and reduce other health and environmental risks around the state.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Portions of some state owned buildings present a severe asbestos exposure hazard to building occupants. Many transformers on state campuses are suspect of containing PCB's. These should be identified, their exposure hazard assessed, and severe exposures eliminated. The state agencies own numerous underground storage tanks which do not comply with current regulations.

E. ALTERNATIVES CONSIDERED:

1. Identify and remove hazardous materials, including non-complying underground storage tanks.
2. Do nothing.

Rationale for Selection of a Particular Alternative:

To do nothing assumes an irresponsible attitude toward the environment and the health of state employees, students and patients.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture and Engineering

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	30,000
Soil Testing:	\$	12,000
Other:	\$	
3. Construction Cost	\$	621,800
4. Architectural/Engineering Fees:	\$	74,200
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	
9. Other:	\$	62,000
	\$	
TOTAL COST	\$	800,000
Less other funds available		
Source <u>Plant Funds</u>	\$	150,000
	\$	
Long Range Building Fund	\$	650,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: N/A	
Number of Additional Personnel Required: None	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$

Project Title Replace Water & Steam Lines  
 Project Priority 5  
 Biennium 1992 - 1993

Department INSTITUTIONS  
 Agency/Program Montana Developmental Center

A. THIS PROJECT: (Check one)

☐ Is an Original Facility Major Maintenance Class  
☒ Improves an Existing Facility x Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Montana Developmental Center, Boulder

(Check where appropriate)  
☒ Site on Owned Property Outside of 100 Year Flood Plain  
☒ Site to be Selected x Utilities Already Available  
☐ Site Already Selected x Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will replace deteriorated water lines throughout the north side of the campus and replace steam lines under building 9. (continued on General Narrative)

Impact on Existing Facilities:

The project will improve efficiency of water and steam distribution systems.

Number to be served by Facility: 175 residents + staff

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The existing coated steel pipe water lines were installed in 1947. Repaired sections show a general eroding of the inside of the pipes. Water tests exceed the max. EPA allowable concentration for lead; 75% of the tests exceed the max. levels proposed by EPA. Steam lines serving the kitchen have deteriorated to the point repairs are unfeasible in some areas. Leaks in serving lines have caused some contamination during food preparation.

E. ALTERNATIVES CONSIDERED:

1. Continue to operate with existing system and make repairs as resources allow.
2. Replace defective systems.

Rationale for Selection of a Particular Alternative:

The system has deteriorated to a point where spot repairs are no longer feasible. System replacement will reduce lead hazard to staff and clients, and improve overall system efficiency.

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

## F. ESTIMATED COST OF PROJECT

Source of Estimate: MDC - Physical Plant Personnel

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: Water Analysis \$ 400

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 14,278

5. Utilities: \$ 122,300

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 12,230

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ \_\_\_\_\_

Less other funds available \$ \_\_\_\_\_

Source \$ 0

Long Range Building Fund \$ 149,208

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: September, 1992

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY (Continuation)

Funds for this project are allocated as follows:

Replace North campus water lines	106,610
Replace Bldg 9 steam lines	<u>42,208</u>
TOTAL	149,208

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Replace & Improve Roofs  
 Project Priority 6  
 Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program 7 Units, Refer to Location

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: EMC, UM, MSU, WMC, GF Vo-Tech,  
Billings Vo-Tech, Butte Vo-Tech  
 (Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

## C. DESCRIPTION OF FACILITY:

General Description:

The project will replace or provide major maintenance/protective coatings to a number of roofs, thus ensuring the future service of the buildings. Refer to General Narrative for project descriptions and cost breakdown.

Impact on Existing Facilities:

Work will extend life of roofs or replace deteriorated roofs thus reducing the potential for damage to building structure, interior finish and contents.

Number to be served by Facility: All Bldg occupants

Functional Space Requirements: N/A

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

State owned roofs continue to deteriorate. Roofs need to be continually maintained to prevent further deterioration. When roofs fail they must be replaced to prevent damage to building and contents.

## E. ALTERNATIVES CONSIDERED:

1. Replace all repairs requested.
2. Develop conscientious program for addressing deteriorating roofs.
3. Ignore roof maintenance and replacement.

## Rationale for Selection of a Particular Alternative:

This project represents a balanced mix of maintaining roofs which are serviceable and replacing membranes/insulation which have deteriorated to a point where they can no longer be maintained or where continued maintenance is not cost effective.

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

## F. ESTIMATED COST OF PROJECT

Source of Estimate: A/E & Individual Units

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 1,224,810

4. Architectural/Engineering Fees: \$ 93,260

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 121,480

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 1,439,550

Less other funds available

Source 72310 \$ 350,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 1,089,550

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: Varies

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

REPLACE & IMPROVE ROOFS, MONTANA UNIVERSITY SYSTEM

Priority/Roof Request Description

	LRBF Requested	Amount Recommended
EASTERN MONTANA COLLEGE		

2. Physical Education Building

The concrete barrel vault roof has a deteriorated built-up roof membrane. Interior finish is a 5/8" thick cementitious spray which contains 10-15% chrysotile asbestos. The material is well adhered except where water penetration has allowed material to delaminate. This project will increase the insulation and add a single ply membrane roof. The project will mitigate existing asbestos exposures, and assure the project does not cause unacceptable levels of asbestos release into the building. If funds proposed are inadequate the project may be supplemented from priority #4 funds.

650,000  
LRBF  
Plant Funds

150,000  
350,000

8. Education Building

A fluid applied neoprene membrane applied in 1976 disintegrates where water ponds. The project will replace rotted plywood and add new roof.

91,000

91,000



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

REPLACE & IMPROVE ROOFS, MONTANA UNIVERSITY SYSTEM

Priority/Roof Request Description

UNIVERSITY OF MONTANA

10.(1) Schreiber Gym

The vaulted built-up roof is 43 years old. The project provides a new historically appropriate roof; we recommended additional funds as contingency to address possible deterioration of the wood deck.

10.(2) Building 32

10.(3) Science Complex

10.(4) Botany

Replace 41 year old built-up and asbestos shingle roof. Project was increased to address asbestos shingles.

MONTANA STATE UNIVERSITY

McCall Hall

Johnson Hall

Project was not requested, however, while replacing pavers and membrane, the substructure was found to have deteriorated to the point where replacement of the entire system was needed. Replacement cost approached cost of new construction without solving the basic problem, namely, the roof area being used as a walking surface. The preferred solution was to raise roof above the plaza and in essence create additional enclosed space. Total cost for unfinished space is \$300,000 with balance being reappropriated from remaining funds in previously appropriated U system roofing projects. MSU has indicated they will use the additional spaces as storage.

LRBF  
Requested

Amount  
Recommended

188,000 208,000

187,000 0

142,000 0

65,000 72,000

65,000 0

0 113,220

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

REPLACE & IMPROVE ROOFS, MONTANA UNIVERSITY SYSTEM

Priority/Roof Request Description

WESTERN MONTANA COLLEGE

8. Arts and Crafts Building

Asphalt shingle roof is 30 years old and needs to be replaced.

9. Auditorium

10. Miscellaneous Roof Maintenance

NORTHERN MONTANA COLLEGE

11. Main Gymnasium

HELENA VO-TECH

1. Donaldson Hall

GREAT FALLS VO-TECH

3. Great Falls Vo-Tech Building

The original roof has deteriorated to the point it cannot be effectively repaired. This project will add insulation and a new membrane.

BILLINGS VO-TECH

1. Billings Vo-Tech Building

Existing roof has not been aluminized. The project will aluminize the roof to prolong its useful life.

BUTTE VO-TECH

8. Butte Vo-Tech Building

Existing roof has not been aluminized. The project will aluminize the roof to prolong its useful life.

LRBF Requested	Amount Recommended
20,330	20,330
37,800	0
25,000	0
84,000	0
230,350	0
400,000	400,000
20,000	20,000
15,000	15,000

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Replace & Repair Roofs  
Project Priority 7  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ I Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Cottonwood Cottage, MVS, Helena  
Sundance Lodge, PHS, Miles City

(Check where appropriate)  
☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will replace the roof on Cottonwood Cottage with a sloped roof, and flash parapet walls on Sundance Lodge. The project can be summarized as follows:

Replace Roof Cottonwood .....	\$115,000
Replace Flash Sundance Roof .....	12,600
TOTAL	\$127,600

Impact on Existing Facilities:

Repairs and new roof will prolong life expectancy of the buildings and eliminate water damage.

Number to be served by Facility: 75 residents

Functional Space Requirements: N/A

Department FAMILY SERVICES  
Agency/Program Mountain View/Pine Hills Schools

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The roof on Cottonwood Cottage is 30 years old; it leaks during rain storms and snow melt. Roof repairs are continuous and the maximum life expectancy in Montana of a relatively flat roof is 20-25 years, under ideal conditions, i.e. roofing with nominal slope spec, installation conditions, maintenance, etc. Masonry parapet caps on Sundance allow moisture penetration into the building.

E. ALTERNATIVES CONSIDERED:

1. Continue spot repairs & stop-gap maintenance.
2. Install flat roof on Cottonwood.
3. Build slope to roof & add insulation and correct flashing deficiency at PHS.

Rationale for Selection of a Particular Alternative:

Alternate #3 not only provides positive drainage from the roof, but creates an attic area to add insulation and buffer the concrete roof structure from excessive heat buildup during summer. (PHS) Total roof replacement would most adequately provide protection to lodge & contents. Project requested \$30,883 for new Sundance roof and \$57,200 for Alternate #2.

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

## F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 106,145

4. Architectural/Engineering Fees: \$ 10,840

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 10,615

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ \_\_\_\_\_

Less other funds available \$ \_\_\_\_\_

Source 0

Long Range Building Fund \$ 127,600\*

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: October, 1991

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

\* See Rationale for Selection of a Particular Alternative.



# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Replace Academic Bldg Roof & Misc. Repairs  
 Project Priority 8  
 Biennium 1992 - 1993

Department EDUCATION  
 Agency/Program Montana School for Deaf & Blind

## A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ I Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

## B. LOCATION: School for the Deaf & Blind

Great Falls  
 (Check where appropriate)

- ☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

## C. DESCRIPTION OF FACILITY:

General Description:

The project will replace the original 1971 built up roof on the Academic Building; install rain gutters and downspouts on the cottages to collect and move water away from the building. Project also addresses condensation problems in the gymnasium. (continued on General Narrative)

## Impact on Existing Facilities:

A new roof will stop further water damage to the interior of the building and, thus, protect the state's investment in the Academic Building. Correction of other problems will also prevent further water damage.

Number to be served by Facility: Approx. 120 students

Functional Space Requirements: N/A

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The current roof has reached the end of its useful life. The roof has developed numerous cracks and blisters. Water leaks into the interior of the building every time it rains. Cottages do not have rain gutters, as a result water damages wood facias and causes moisture problems at crawl spaces.

(continued on General Narrative)

## E. ALTERNATIVES CONSIDERED:

1. Replace only the roof, and defer other projects.
2. Consolidate 3 moisture related projects into a single appropriation.

## Rationale for Selection of a Particular Alternative:

The existing roof is brittle and cracking to the point it cannot be effectively patched. The roof must be replaced. Other projects are of a less critical nature, but should be accomplished soon to prevent further damage. Consolidation of work assures projects will be completed cost effectively.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering Division

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other:	\$	
3. Construction Cost	\$	287,300
4. Architectural/Engineering Fees:	\$	22,980
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	28,720
9. Other:	\$	
	\$	
TOTAL COST	\$	339,000
Less other funds available		
Source	\$	0
	\$	
Long Range Building Fund	\$	339,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: September, 1991	
Number of Additional Personnel Required: N/A	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( N/A )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
2. SECOND BIENNIUM ( N/A )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
3. THIRD BIENNIUM ( N/A )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY (Continued)

Cost allocation for the project can be summarized as follows:

Roof Replacement .....	\$310,000
Install Gutters .....	\$20,000
Drain Clerestories .....	\$9,000
Total .....	<u>\$339,000</u>

D. EXPLANATION OF PROBLEM BEING ADDRESSED (Continued)

High humidity in the locker rooms and pool areas condensates on clerestory windows; the water needs to be collected and properly drained to prevent further damage to interior finishes.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Replace Roofs  
Project Priority 9  
Biennium 1992 - 1993

Department INSTITUTIONS  
Agency/Program Montana State Prison

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Major Maint. Class

B. LOCATION: Board of Pardons & Satellite Warehouses  
Montana State Prison, Deerlodge  
(Check where appropriate)

- ☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

Replace the shingle roof on the Board of Pardons Building in a historically sensitive manner and replace the plywood deck and shingles at the prison warehouses. Existing framing will be upgraded. Both projects are estimated based on inmate labor.

Impact on Existing Facilities:

Maintain buildings by preventing water penetration.

Number to be served by Facility: 1,200 plus & BOP Staff

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The current Board of Pardons Building roof system is spaced board and cedar shingle construction. The roof design poses inherent design deficiencies which make repairs unfeasible. The shingle roof and substructure of the satellite warehouses has deteriorated to the point where replacement is necessary to protect contents of the buildings.

E. ALTERNATIVES CONSIDERED:

1. Defer maintenance and continue to live with leaking roofs.
2. Replace roofs.
3. Abandon buildings.

Rationale for Selection of a Particular Alternative:

The buildings are appropriate for their current use, however repairs must be made to insure continued function, and prevent damage to contents.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: MSP - Maint. Services Dept.

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 27,000

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 3,000

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ \_\_\_\_\_

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 30,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: September, 1993

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title \_\_\_\_\_ Construction Litigation  
Project Priority 10  
Biennium 1992 - 1993

Department ADMINISTRATION  
Agency/Program Architecture & Engineering

A. THIS PROJECT: (Check one)

\_\_\_ Is an Original Facility \_\_\_ Major Maintenance Class  
\_\_\_ Improves an Existing Facility \_\_\_ Replaces Existing Facility  
x Other Provides fund to resolve disputes

B. LOCATION: Statewide

(Check where appropriate)

\_\_\_ Site on Owned Property \_\_\_ Outside of 100 Year Flood Plain  
\_\_\_ Site to be Selected \_\_\_ Utilities Already Available  
\_\_\_ Site Already Selected \_\_\_ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The appropriation would designate specific funds for A & E to seek legal resolution, by mediation or arbitration or litigation of construction disputes, as well as defend itself when such actions are initiated by second parties.

Impact on Existing Facilities:

The fund will leave the state in a better position to demand competent work and resolve disputes.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Resolution of contract claims between the State and Contractors and Design Professionals can generate unanticipated costs beyond the scope of the original project estimate.

E. ALTERNATIVES CONSIDERED:

1. Hire a staff attorney to handle disputes and request appropriations from the legislature after claims are settled.
2. Develop fund to settle claims in a responsible, timely manner.
3. Increase contingencies to anticipate problems on each project.

Rationale for Selection of a Particular Alternative:

The fund allows the State to defend itself against unwarranted claims and to aggressively seek equitable settlements without incurring expense of interest for late payment.

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: Legal costs & dispute \$ 345,000

resolution \$ \_\_\_\_\_

TOTAL COST \$ \_\_\_\_\_

Less other funds available \$ \_\_\_\_\_

Source 0 \$ \_\_\_\_\_

\$ \_\_\_\_\_

Long Range Building Fund \$ 345,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: N/A

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Maintenance & Improvement Projects  
 Project Priority 11  
 Biennium 1992 - 1993

Department STATE LANDS  
 Agency/Program Forestry/Field Operations

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other will both maintain & improve facilities

B. LOCATION: Regional & Unit Facilities, Statewide

(Check where appropriate)

- ☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

Repairs are being conducted to state owned facilities at various field offices where Department personnel work and reside. Refer to the General Narrative for a listing of typical needs of the Department of State Lands. Funds will be appropriated to DSL to allow them to effectively accomplish smaller projects and utilize Job Corps personnel where feasible.

Impact on Existing Facilities:

Corrects safety deficiencies and maintenance on existing buildings to prolong their useful life.

Number to be served by Facility: Occupants & visitors

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Field offices and wildfire initial attack stations are in need of a variety of repairs and improvements to effectively manage State properties.

E. ALTERNATIVES CONSIDERED:

1. Continue to tolerate deficiencies, structural problems and safety violations.
2. Complete projects on a priority basis as funding allows.

Rationale for Selection of a Particular Alternative:

Performing projects meets safety and health needs of employees working and residing at state facilities.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>209,780</u>
4. Architectural/Engineering Fees:	\$ <u>8,500</u>
5. Utilities:	\$ _____
6. Landscaping & Site Development:	\$ _____
7. Equipment:	\$ _____
8. Contingencies:	\$ _____
9. Other:	\$ _____
	\$ _____
TOTAL COST	\$ <u>218,280</u>
Less other funds available	
Source 03068	\$ <u>100,000</u>
	\$ _____
Long Range Building Fund	\$ <u>118,280*</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: Varies	
Number of Additional Personnel Required: None	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____

\* See General Narrative

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

\*Project requested at \$118,280, however project has been expanded to allow use of federal funds to expand and develop fire caches and fire support facilities.

DEPARTMENT OF STATE LANDS MAINTENANCE IMPROVEMENT PROJECTS

Replace roof on Stillwater residence	9,000
Replace roof on Stillwater office	9,000
Replace floor joists in cookhouse	14,000
Replace roof on Helena unit office	6,000
Replace roof on Helena dispatch center	6,000
Replace CLO carpet	7,500
Install chainlink fence for CLO security	11,500
Replace drain field at Anaconda residence	900
Erect Missoula unit fire cache	5,000
Replace Anaconda office siding	2,180
Bury electrical wire	1,200
Replace SWLO shop overhead door	7,000
Replace SWLO warehouse overhead door	6,000
Paint equip. development shop & fence	5,000
Replace lights in EDC paint room	3,000
Install furnace in EDC paint room	2,000
Move walk-in freezer from coord. ctr. to warehouse	1,500
Build coord. ctr. parking shed	5,000

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Moisture Protection  
 Project Priority 12  
 Biennium 1992 - 1993

Department INSTITUTIONS  
 Agency/Program Eastmont Human Services Center

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☒ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Multipurpose Building & Cottage I,  
Eastmont Human Service Center, Glendive  
 (Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

## C. DESCRIPTION OF FACILITY:

General Description:

The project will expand the subdrainage system of cottage 2 to include cottage 1 and the Multipurpose building. Funds have also been included to repair or replace the roof of the Multipurpose building as needed. The work can be summarized as follows:

Subdrainage system .....	\$ 87,800
Roof Repairs/replacement .....	10,650
TOTAL .....	\$ 98,450

Impact on Existing Facilities:

Not correcting the problem will have an effect on the entire building, i.e., rusting the heating units, water heaters, support beams, deteriorating supporting walls.

Number to be served by Facility: 55 resid. & 98 empl.

Functional Space Requirements: 9,583 sq ft

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Alkaline water seepage in the basement and crawl spaces promotes extensive corrosion of fixtures and structural components. The area will accumulate as much as 6" of water during peak run off, and soils remain moist thereafter, causing humidity problems in the building. The roof has flashing problems which must be addressed.

## E. ALTERNATIVES CONSIDERED:

1. Continue with problem and allow components of the building to corrode until extensive repairs are necessary.
2. Install subdrainage system only.
3. Install subdrainage system and roof.

## Rationale for Selection of a Particular Alternative:

Alternative #3 was selected. Subdrainage system installed in Cottage 2 has been very successful. This project will expand the system to solve similar problems in other buildings. Funds will repair/replace a leaking roof with inadequate flashing. Agency requested \$116,085 to install subdrainage, floor, sprinkler and second exit, Multi-Purpose Building.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: A & E Division

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other: Advertising/Printing	\$	400
3. Construction Cost	\$	80,040
4. Architectural/Engineering Fees:	\$	10,405
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	7,605
9. Other:	\$	
	\$	
TOTAL COST	\$	98,450
Less other funds available		
Source	\$	-0-
	\$	
Long Range Building Fund	\$	98,450

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: November, 1991

Number of Additional Personnel

Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM (     N/A     )

Personnel Services	\$	
Operating Expenses	\$	
Maintenance Expenses	\$	

2. SECOND BIENNIUM (     N/A     )

Personnel Services	\$	
Operating Expenses	\$	
Maintenance Expenses	\$	

3. THIRD BIENNIUM (     N/A     )

Personnel Services	\$	
Operating Expenses	\$	
Maintenance Expenses	\$	

\* Rationale for Selection of a Particular Alternative



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Improve Underground Utilities, Phase I  
Project Priority 13  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ I Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: UM, Missoula; MSU, Bozeman; NMC, Havre

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project addresses general deterioration of the underground utilities on these campuses. Refer to the General Narrative for a more complete description of each project.

Impact on Existing Facilities:

Deteriorated infrastructure will be identified and upgraded to provide efficient delivery of services.

Number to be served by Facility: Students & faculty

Functional Space Requirements: N/A

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program UM, MSU & NMC

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Campuses have identified components of their underground infrastructure, which due to age and soil conditions have deteriorated to the point they are no longer capable of adequately supporting the institutions. Lost water, natural gas and steam condensate increase operating costs.

E. ALTERNATIVES CONSIDERED:

1. Continue with present situation until a crisis presents itself.
2. Arbitrarily replace systems.
3. Undertake an orderly program to determine conditions, provide protection to sound components as appropriate to extend their life, and replace those components which are at or near the end of their useful life.

Rationale for Selection of a Particular Alternative:

Alternative #3 is a responsible approach to maintaining this portion of the state's infrastructure as it provides corrective action, and develops sound decisions based on long term, cost effective solutions.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Campus Physical Plants

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ 22,000

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 58,200

5. Utilities: \$ 378,000

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 37,800

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 496,000

Less other funds available

Source 72201 \$ 200,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 296,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: Varies

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY (Continued)	Amount Requested	Amount Recommended
REPLACE WATER LINES, UM	310,600	70,000
<p>The project is a continuation of last biennium's appropriation to replace deteriorated 1940 "Invasion Pipe". Funds were not sufficient to replace the entire main and the remaining portion needs to be replaced.</p>		
REPLACE AND PROTECT STEAM & CONDENSATE LINES, MSU	695,000	LRBF 200,000 Aux. 200,000
<p>Condensate returns of the direct buried steam distribution system have corroded to the point where leaks in the system require extensive make-up water. The system provides heat from the main heating plant to the entire campus with minor exceptions. The delivery system has deteriorated to the point where, at times, adequate treated make-up water cannot be added to keep the boilers operating at full capacity. This requires a reduction in the quantity of steam generated, and raises the prospect of curtailing service to some buildings during cold weather. The vintage of the system, and symptomatic need for make-up water support the findings of a 1989 Corrosion Study which recommends "approximately 7,500 lineal feet of condensate return line be provided with cathodic protection....a replacement on a 'as funds permit' basis of CRETE condensate lines.... Installation of new piping in tunnels is also a highly viable alternative, if not cost prohibitive". This project will identify the condition of specific sections and protect or replace them as conditions warrant. MSU requests replacement of lines with a direct burial system, however A &amp; E recognizes long term benefit of developing a tunnel system for distribution mains and therefore recommends that a primary utility tunnel be incorporated in the Centennial Mall Renovation. The funds recommended are inadequate to complete the entire project. Distribution of funds will be equitably shared between the LRBF and Auxiliary Enterprises.</p>	26,000	26,000
CORROSION CONTROL STUDY, NMC		
<p>The current rate of 3-6 natural gas distribution leaks and 1-2 water distribution leaks per year suggests the need for a survey of buried utilities to recommend corrective action. Corrective measures will be implemented as need dictates and funds allow.</p>		
TOTAL	<u>1,031,600</u>	<u>496,000</u>

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Maintain Roads & Parking Lots  
Project Priority 14  
Biennium 1992 - 1993

Department INSTITUTIONS  
Agency/Program EHSC, MSH, MVH

A. THIS PROJECT: (Check one)

☐ Is an Original Facility II Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Eastmont, Glendive, Montana State Hospital,  
Warm Springs, Montana Veterans' Home, Columbia Falls  
(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will patch, chip seal and/or resurface existing pavement. The project can be summarized as follows:

Eastmont Human Services Ctr.....	26,625
Montana Veteran's Home.....	11,000
Montana State Hospital.....	112,375
TOTAL.....	150,000

Impact on Existing Facilities:

Insure continued use of streets and parking lots, by preventing further deterioration from water penetration and freeze/thaw.

Number to be served by Facility: Resident, staff, visitors

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Pavement at Montana State Hospital has deteriorated to a point it is marginally maneuverable. Other campuses are at the point they will deteriorate rapidly without proper preventative maintenance.

E. ALTERNATIVES CONSIDERED:

1. Allow pavement to continue to deteriorate until replacement is necessary.
2. Remove asphalt pavement and grade roads periodically.
3. Patch and seal to protect the state's investment.

Rationale for Selection of a Particular Alternative:

Alternate #3 is the most logical alternative and least expensive in the long run. Project funds EHSC & MVH at amount requested, but significantly reduces MSH's total street requests of \$1,276,610.



# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

## F. ESTIMATED COST OF PROJECT

Source of Estimate: DEPT OF INSTITUTIONS

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 137,600

4. Architectural/Engineering Fees: \$ 12,400

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ 150,000\*

Less other funds available  
Source \$ 0

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: August, 1992

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

\*See Rationale for Selection of a Particular Narrative.

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Seal Buildings  
 Project Priority 15  
 Biennium 1992 - 1993

Department INSTITUTIONS  
 Agency/Program Montana State Prison

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Completes construction

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Recently constructed concrete buildings were left unfinished due to lack of funds. Without exterior "weather" sealing, the concrete deteriorate due to moisture penetration which, in time, will result in spauling of the concrete surface.

## B. LOCATION: Montana State Prison, Deer Lodge

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

## C. DESCRIPTION OF FACILITY:

### General Description:

This project will apply an exterior finish to buildings constructed in the last major expansion at Montana State prison. The project will be completed with inmate labor and supervised using a trade qualified temporary staff member.

### Impact on Existing Facilities:

Will allow the building to blend into and match the existing campus.

Number to be served by Facility: 1,500

Functional Space Requirements: N/A

## E. ALTERNATIVES CONSIDERED:

1. Do this finish work in phases and ask for more operational funds to do this over a period of 6-8 years.
2. Leave building as is.
3. Paint the building.

### Rationale for Selection of a Particular Alternative:

The alternative recommended provides funds to purchase material to seal building exteriors. Interior painting has been deleted from the scope of work and will be the responsibility of operational budget.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: MSP - Maintenance Dept/A & E

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: Materials \$ 25,000

\$ \_\_\_\_\_

TOTAL COST \$ 25,000

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 25,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: July, 1991

Number of Additional Personnel Required: .5 FTE

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( 92/93 )

Personnel Services \$ 13,794

Operating Expenses \$ 0

Maintenance Expenses \$ 0

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Repair & Improve Heating System  
 Project Priority 16  
 Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program Western Montana College

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☒ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Boiler Plant, WMC, Dillon

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

## C. DESCRIPTION OF FACILITY:

### General Description:

The project will replace heating system valves, and install an emergency generator to operate the plant during a power outage.

### Impact on Existing Facilities:

Will reduce operating cost and prevent costly freeze up of campus during an extended power outage.

Number to be served by Facility: 1,200

Functional Space Requirements: N/A

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Main steam header and boiler valves are leaking and beyond repair. Currently the boiler plant does not have an alternate energy source to pump steam from the boiler plant to campus buildings. In addition Boiler #2 does not have an alternate fuel source, a number of auxiliary water heaters need replacement.

## E. ALTERNATIVES CONSIDERED:

1. Do complete project.
2. Repair valves, and provide back up power.
3. Continue status quo.

## Rationale for Selection of a Particular Alternative:

Alternate #2 was chosen to protect the campus from extensive damage. Boiler #2 conversion is a lower priority as Boiler #1 operates on alternate fuel and is capable of maintaining the campus though at a less comfortable temperature range. The boiler replacement is an auxiliary responsibility. Project request was for \$135,500.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 44,800

4. Architectural/Engineering Fees: \$ 5,375

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 5,480

9. Other: Administrative \$ 2,245

\$ \_\_\_\_\_

TOTAL COST \$ 57,900

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 57,900

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: October, 1991

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Improve Handicapped Access  
Project Priority 17  
Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program System wide

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Various campuses, Statewide

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This appropriation will fund currently unspecified handicapped projects throughout the system. The Commissioner's Office in consultation with handicapped advocate groups will determine priorities and the most effective use for the funds.

Impact on Existing Facilities:

Will make academic areas more accessible to the physically impaired.

Number to be served by Facility: Disabled Individuals

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The Board of Regents has recommended \$1,500,000 for handicapped access improvements. This requested about 40% of the accessibility projects requested by the various units. Students and faculty possess a wide range of severe to fairly minor disabilities. The state must continue to remove handicap barriers and provide adequate access to university programs.

E. ALTERNATIVES CONSIDERED:

1. Fund all reasonable project requests.
2. Fund specific projects as funds allow.
3. Allocate same level of funding at Commissioner's discretion.
4. Do nothing.

Rationale for Selection of a Particular Alternative:

Alternate #3 represents a reasonable response to the needs of the physically impaired, and gives these people an active voice in determining how the project will develop to best serve their needs.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 301,800

4. Architectural/Engineering Fees: \$ 33,200

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ 335,000

Less other funds available

Source \$ 0

Long Range Building Fund \$ 335,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: Varies

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Replace Carpet  
 Project Priority 1B  
 Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program Great Falls Vo-Tech

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☒ I Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Great Falls Vo-Tech, Great Falls

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☒ Site Already Selected ☐ Access Already Available

## C. DESCRIPTION OF FACILITY:

General Description:

The project will replace carpet in the corridors and several classrooms where existing floor coverings have deteriorated to a point where they are no longer serviceable.

Impact on Existing Facilities:

Will reduce state's potential liability for injuries due to hazard from worn and deteriorated carpet.

Number to be served by Facility: 680 students & staff

Functional Space Requirements: 24,043

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The original carpet installed in the mid-seventies has deteriorated to the point it is delaminating from the backing. Ripples and loose carpet are a tripping hazard.

## E. ALTERNATIVES CONSIDERED:

1. Replace carpet in entire building.
2. Replace carpet in corridors and where carpet is in poorest condition.
3. Continue to maintain in spots.

Rationale for Selection of a Particular Alternative:

Alternative #2 will result in a safer environment, decrease janitorial work, and provide better acoustics and appearance.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Great Falls Vo-Tech

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 54,550

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 5,450

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 60,000

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 60,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: August, 1991

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Kitchen Upgrade  
Project Priority 19  
Biennium 1991 - 1993

Department MILITARY AFFAIRS  
Agency/Program Army National Guard

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Hamilton, Billings, Bozeman, Miles City,  
Kalispell  
(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will replace lead soldered sinks, and wood with linoleum counter tops; and install range hoods.

Impact on Existing Facilities:

Upgrade kitchen to safety and health code compliance and extend the life of the facility.

Number to be served by Facility: 60/unit

Functional Space Requirements: 8,000 sq. ft. /Armory

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The kitchens are over 25 years old, and have deteriorated to the point that they cannot be used because they do not meet health and safety standards.

E. ALTERNATIVES CONSIDERED:

1. Do nothing and continue to not use kitchen.
2. Upgrade kitchens.

Rationale for Selection of a Particular Alternative:

Alternate #2 was chosen because the inability to use the existing kitchen limits use of the armories.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Dept of Military Affairs

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 40,000

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 5,000

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ 45,000

Less other funds available

Source \$ 0

Long Range Building Fund \$ 45,000\*

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: January, 1992

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

\* See General Narrative

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

\* Project reduced from \$89,500 requested by Military Affairs.

National Guard Armories are often the location of numerous community activities as well as the prime location for guard unit training. The kitchens are used to support guard unit meals and often large community gatherings as well. The kitchens in the older armories no longer can be used because of poor ventilation, no sanitary dishwashing equipment, deteriorated counter tops and rusting lead seamed sinks.

The Guard currently must contract for meals at a number of these locations and the upgrade of the kitchens is needed to support the units.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Building Improvements  
Project Priority 20  
Biennium 1992 - 1993

Department INSTITUTIONS  
Agency Program Center for the Aged

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other ☐

B. LOCATION: Center for the Aged, Lexington

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

(General Description:

The project will replace exterior doors and aging obsolete asphalt tile in the patient living areas. It will also construct a 288 sq ft addition to relocate the walk-in freezer/cooler and allow reorganization of the kitchen work area.

Impact on Existing Facilities:

The project will improve the appearance of the facility, make it safer, more efficient and reduce drafts.

Number to be served by Facility: 191 residents/75 staff

Functional Space Requirements: 47,660

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The asphalt tile flooring installed in 1952 is thicker than replacement tile currently available. The difference causes a tripping hazard for elderly residents. Tiles around toilets have lifted allowing urine penetration which creates odor and sanitation problems. (continued on General Narrative)

E. ALTERNATIVES CONSIDERED

1. Continue to operate with deficient, ineffective systems.
2. Do major work and piece meal repairs as maintenance budget allows.
3. Fund entire project.

Rationale for Selection of a Particular Alternative:

Alternative #3 was selected as there is inadequate space in the kitchen for the present food service requirements. Renovation to the resident living areas improves the comfort and safety of our elderly residents.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Local Contractors

1. Land Acquisition: \$                     

2. Preliminary Expenses: \$                     

Site Survey: \$                     

Soil Testing: \$                     

Other: \$                     

3. Construction Cost \$ 88,995

4. Architectural/Engineering Fees: \$ 7,120

5. Utilities: \$                     

6. Landscaping & Site Development: \$                     

7. Equipment: \$                     

8. Contingencies: \$ 8,900

9. Other: \$                     

\$                     

TOTAL COST \$ 105,015

Less other funds available  
Source \$ 0

\$                     

Long Range Building Fund \$ 105,015

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1992

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$                     

Operating Expenses \$                     

Maintenance Expenses \$                     

2. SECOND BIENNIUM ( N/A )

Personnel Services \$                     

Operating Expenses \$                     

Maintenance Expenses \$                     

3. THIRD BIENNIUM ( N/A )

Personnel Services \$                     

Operating Expenses \$                     

Maintenance Expenses \$

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED: (Continuation)

Exterior doors need to be replaced as they are warped and are beginning to delaminate; hardware is wearing out and replacement parts are no longer available. The kitchen is not large enough to accommodate the storage and movement of portable food carts and food dispenser units. Currently the units block established walkways, posing serious safety hazards to employees, and are inconvenient for the housekeeping staff to clean.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Improve Sidewalks & Fire Access  
 Project Priority 21  
 Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program UM & NMC

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ II Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: University of Montana, Missoula

Northern Montana College, Havre

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☒ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project upgrades fire access equipment routes and deteriorated sidewalks at UM and replaces a severely sloping sidewalk at Brockman Center, NMC. The funding allocation can be summarized as follows:  
 Fire Access & Repairs, UM..... \$63,000  
 Replace Sidewalk, NMC..... 23,000  
 TOTAL..... \$86,000

Impact on Existing Facilities:

The project will improve fire protection access and abate hazardous conditions at selected sidewalks.

Number to be served by Facility: Campus Community

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Poorly marked and inadequately constructed fire lanes could hamper timely response in case of a fire. Irregular and sloping walking surfaces are hazardous to pedestrians and impairs the maneuvering and mobility of persons in wheelchairs.

E. ALTERNATIVES CONSIDERED:

1. Continue with problem in current situation.
2. Partially fund projects.
3. Completely fund projects.

Rationale for Selection of a Particular Alternative:

Alternate #2 was selected as adequate funds are unavailable to fund entire request and thus replacement must be on a priority basis. Many of the sidewalks are clearly deteriorated, however minor irregularities on others do not present a hazard of magnitude to warrant their replacement. NMC funded as requested; UM funded at level reduced from \$550,820 requested.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Facility Services

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ 83,820

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 2,180

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 86,000

Less other funds available  
Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 86,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: August, 1992

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Replace Multi-Purpose Building Flooring  
Project Priority 22  
Biennium 1992 - 1993

Department INSTITUTIONS  
Agency/Program Montana State Hospital

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Multipurpose Building, Montana State  
Hospital, Warm Springs  
(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project replaces deteriorated floors in the corridors, library and selected classrooms.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Existing vinyl-asbestos floor tiles become loose, and create an uneven walking surface which is hazardous to staff and patients. Carpet in library has reached the end of its useful life.

E. ALTERNATIVES CONSIDERED:

1. Patch when time and maintenance funds are available.
2. Do nothing.
3. Fund project.

Impact on Existing Facilities:

New floors will create a safer, more sanitary environment for both staff and residents, as well as improved appearance.

Rationale for Selection of a Particular Alternative:

Alternative #3 provides a safer, more aesthetic environment for patients and staff and eliminates labor and material costs for repairs.

Number to be served by Facility: 230

Functional Space Requirements: 21,747

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 24,360

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 2,440

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 26,800

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 26,800

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: August, 1992

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Preliminary Design for Prison Expansion  
Project Priority 23  
Biennium 1992 - 1993

Department INSTITUTIONS  
Agency/Program Montana State Prison

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Major expansion of existing facility

B. LOCATION: Montana State Prison, Deer Lodge

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The appropriation develops the design for the major expansion of the prison as delineated in priority #57 in the Bonded Program. It will fund the site survey, soil tests, code review and design fees through the bid stage.

Impact on Existing Facilities:

Funding the preliminary design with the cash program allows the deferral of bond sales and minimizes the impact on the Debt Service Account.

Number to be served by Facility: Currently 1,140 inmates

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Current debt service does not reduce significantly until 1996. Current population at the prison is increasing such that a major expansion cannot be delayed until that time.

E. ALTERNATIVES CONSIDERED:

1. Include preliminary design in bonded program.
2. Fund preliminary design with cash program, and remaining project costs in bonded program.

Rationale for Selection of a Particular Alternative:

Alternative #2 makes the bonded program more feasible. Bonds will not be sold until the project is ready for bid, about July, 1992; the impact on the Debt Service Account will be in the range of \$800,000 for this biennium.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ 15,500

Soil Testing: \$ 8,000

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 820,000

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: Code Review \$ 34,000

\$ \_\_\_\_\_

TOTAL COST \$ 877,500

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 877,500

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: July, 1992

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Construct Unit Office  
Project Priority 24  
Biennium 1992 - 1993

Department STATE LANDS  
Agency/Program Forestry/Field Operations

A. THIS PROJECT: (Check one)  
     Is an Original Facility      Major Maintenance Class  
     Improves an Existing Facility   x   Replaces Existing Facility  
     Other     

B. LOCATION: Forestry Unit Complex, Plains

(Check where appropriate)  
  No   Site on Owned Property      Outside of 100 Year Flood Plain  
     Site to be Selected   x   Utilities Already Available  
  x   Site Already Selected   x   Access Already Available  
     Site currently leased from Sanders County.

C. DESCRIPTION OF FACILITY:  
General Description:

The project will construct a new office/dispatch facility to replace the existing mobile home that is approaching the end of its useful life and improve equipment storage capabilities.

Impact on Existing Facilities:

The current trailer will be converted into quarters and offices for seasonal employees. The seasonal employees' current building will be put into surplus property.

Number to be served by Facility: 25

Functional Space Requirements: 2,550

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The "federal excess property" double wide mobile home currently being used as an office, lacks adequate space and environmental comfort. Cramped working conditions makes effective office function/procedures difficult. Vehicle repairs are performed outdoors on a gravel pad. There is no heated vehicle storage for initial attack tankers; as a result they must be winterized in spring and fall to assure water is available when needed.

E. ALTERNATIVES CONSIDERED:

1. Rent office and shop space.
2. Continue to use existing facility.
3. Construct a new office.
4. Construct a new office and heated vehicle/fire cache building.

Rationale for Selection of a Particular Alternative:

Suitable rentals not available. Existing trailer will not last many more years and is not suitable for state office use. Project funding is based on alternate #3. If the project can be developed along alternate #4 within the funds available the Unit will have attained a complete working facility.

F. ESTIMATED COST OF PROJECT

Source of Estimate:	Architecture & Engineering
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____ 800
Soil Testing:	\$ _____ 1,500
Other:	\$ _____
3. Construction Cost	\$ _____ 181,140
4. Architectural/Engineering Fees:	\$ _____ 14,060
5. Utilities:	\$ _____ 2,000
6. Landscaping & Site Development:	\$ _____ 8,000
7. Equipment:	\$ _____
8. Contingencies:	\$ _____ 21,500
9. Other: Remove underground	\$ _____ 6,000
storage tanks/pump	\$ _____
TOTAL COST	\$ _____ 235,000
Less other funds available	_____
Source	\$ _____ 0
_____	\$ _____
Long Range Building Fund	\$ _____ 235,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date:	March, 1993
Number of Additional Personnel Required:	None
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( 92-93 )	
Personnel Services	\$ _____
Operating Expenses	\$ _____ 1,500
Maintenance Expenses	\$ _____ 500
2. SECOND BIENNIUM ( 94-95 )	
Personnel Services	\$ _____
Operating Expenses	\$ _____ 1,500
Maintenance Expenses	\$ _____ 500
3. THIRD BIENNIUM ( 96-97 )	
Personnel Services	\$ _____
Operating Expenses	\$ _____ 1,500
Maintenance Expenses	\$ _____ 500

\*Project cost increased from original request of \$129,000.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

State Lands conducts business in Plains out of old mobile homes acquired from the Federal Government as outdated surplus property. Since then, they have served on a temporary basis until a more presentable and functional permanent structure could be built. Upkeep is becoming increasingly more difficult and costly; heating bills are unusually high.

The request for Plains Unit Office has been a high priority in the Forestry Division long-range building program for seventeen years.



Project Title Rifle Range Rehabilitation  
Project Priority 25  
Biennium 1991 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Safety and Health compliance

B. LOCATION: Bozeman, Hamilton, Butte  
(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will rehabilitate indoor firing ranges to bring them into compliance with current military health and safety requirements.

Impact on Existing Facilities:

The project will allow for full utilization of the armories training areas and create environmentally safe weapon firing areas for use by members of the National Guard and local citizens.

Number to be served by Facility: 55-100/unit

Functional Space Requirements: 8,000 sq. ft./Armory

Department DEPT OF MILITARY AFFAIRS  
Agency/Program Army National Guard

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Current environmental and safety regulations do not allow for the indoor firing ranges to be used. To make them usable, they must be cleaned, and have existing bullet traps and sand removed; they will then have a new air flow system, bullet traps and illumination devices installed.

E. ALTERNATIVES CONSIDERED:

1. Leave as is and transport troops to other locations for firing.
2. Clean existing areas and change usage.
3. Rehabilitate ranges.

Rationale for Selection of a Particular Alternative:

Alternative #3 was selected as it offers the most practicable and efficient use of the area.

F. ESTIMATED COST OF PROJECT

Source of Estimate: Dept of Military Affairs

1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>500,000</u>
4. Architectural/Engineering Fees:	\$ <u>50,000</u>
5. Utilities:	\$ _____
6. Landscaping & Site Development:	\$ _____
7. Equipment:	\$ _____
8. Contingencies:	\$ <u>15,000</u>
9. Other:	\$ _____
TOTAL COST	\$ _____
Less other funds available	\$ <u>565,000</u>
Source 05009	\$ <u>555,000</u>
Long Range Building Fund	\$ <u>10,000</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1993

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services

\$ \_\_\_\_\_

Operating Expenses

\$ \_\_\_\_\_

Maintenance Expenses

\$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services

\$ \_\_\_\_\_

Operating Expenses

\$ \_\_\_\_\_

Maintenance Expenses

\$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services

\$ \_\_\_\_\_

Operating Expenses

\$ \_\_\_\_\_

Maintenance Expenses

\$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

All National Guard Indoor Firing Ranges in the State of Montana were closed in 1987 due to revisions in environmental and health regulations. This closure severely impacted on the readiness of the National Guard and has also impacted other users of the ranges (local law enforcement, Highway patrolmen, and local marksmanship team members). The federal government recognizes the problem and has recently begun providing funds to rehabilitate the ranges.

Rehabilitation includes the removal of the old bullet traps, installation of a new bullet trap, removal of the existing overhead door, construction of a plenum wall, installation of a new makeup air system with heaters, cleanup of the existing ranges, and installation of new infrared personnel heaters.

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Plan for Chemistry/Pharmacy Renovations  
 Project Priority 26 & Life Sciences Building  
 Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program University of Montana

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Planning

B. LOCATION: University of Montana, Missoula

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

## C. DESCRIPTION OF FACILITY:

General Description:

The project will develop construction documents to bring the Chemistry/Pharmacy Building up to current standards and accommodate undergraduate laboratory classes and graduate research more effectively. It will evaluate needs and consider the cost effectiveness of a phased/priority based renovation versus a major renovation. It will also develop a program and preliminary design for consolidation of (\* continued on General Narrative)

Impact on Existing Facilities:

This request is for planning only and has no impact on existing facilities.

Number to be served by Facility: Students & faculty

Functional Space Requirements: 7,919 & ≈100,000 sq. ft.

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The Pharmacy/Psychology Building includes a second level connection to the Chemistry/Pharmacy Building which links the Pharmacy Department facilities. Renovation of the facilities located on the second floor is needed for the Pharmacy students. The building's elevator is not readily accessible to mobility-impaired students. The entire building suffers from an antiquated heating and ventilating (continued on General Narrative)

## E. ALTERNATIVES CONSIDERED:

1. Construct a new laboratory building.
2. Leave the facilities in present condition.
3. Renovate the facility.
4. Develop plan for renovation/new construction and a program. Approach the future legislature with well defined proposal for addressing needs as identified in the developmental planning phase.

Rationale for Selection of a Particular Alternative:

Alternative #4 was selected because while renovation seems to be the most cost effective manner to address the problem, there are numerous components and an overall development plan of the renovation is needed before funds are committed. There is simply inadequate information regarding the Life Science consolidation to support the need or identify a reasonable program. Planning funds will make an enlightened judgement possible.



F. ESTIMATED COST OF PROJECT

Source of Estimate: Facilities Services/A & E

1. Land Acquisition:	\$
2. Preliminary Expenses:	\$
Site Survey:	\$
Soil Testing:	\$
Other:	\$
3. Construction Cost	\$
4. Architectural/Engineering Fees:	\$ 250,000
5. Utilities:	\$
6. Landscaping & Site Development:	\$
7. Equipment:	\$
8. Contingencies:	\$
9. Other:	\$
	\$
TOTAL COST	\$ 250,000
Less other funds available	
Source 3216x	\$ 50,000
	\$
32101	\$ 150,000
Long Range Building Fund	\$ 50,000*

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: April, 1993

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$

2. SECOND BIENNIUM ( N/A )

Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$

3. THIRD BIENNIUM ( N/A )

Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$

\* See General Narrative

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY: (Continued)

the Life Sciences Departments, including its impact on space utilization of the entire campus. The project can be summarized as follows:

Plan Chemistry/Pharmacy Renovations.....	\$ 50,000*	LRBP
Plan Life Science Consolidation.....	<u>200,000</u>	OTHER FUNDS
TOTAL.....	\$ 250,000	

\* Planning funds reflect reduction from Regents request of \$668,000.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED: (Continued)

system and leaking windows-all of which interfere with the proper conduct of Chemistry/Pharmacy instruction and research. In addition, the Life Sciences Departments (Botany, Zoology, Microbiology, and Biochemistry), are scattered across the campus. Consolidation of departments in close proximity would facilitate interaction to more effectively develop programs. The department is requesting \$12,000,000 authority to construct a building with federal and/or private funds.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Plan Metallurgy Remodel  
Project Priority 27  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Plans for renovation

B. LOCATION: Montana College of Mineral Science and Technology, Butte  
(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will develop a plan and preliminary design for renovation of the Metallurgy Building. The plan will evaluate space needs of the Biology, Environmental Engineering, Petroleum and other departments, as appropriate, and will consider impacts on space utilization of the entire campus.

Impact on Existing Facilities:

This request is for planning only and will have no impact on existing facilities.

Number to be served by Facility: 1,000

Functional Space Requirements: 37,500 sq. ft.

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program Montana Tech

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The building was built in 1928 and labs have changed little since then. The building is structurally sound but the interior is worn and systems are inadequate to support modern equipment. There is no clearly defined program for the use of renovated space or appropriate scope of work.

E. ALTERNATIVES CONSIDERED:

1. Renovate considering possibility of inserting an additional floor within building envelope and totally upgrade interior.
2. Repair interior services and upgrade support systems.
3. Leave as is.
4. Plan for renovation and approach future legislature with well defined proposal to address needs.

Rationale for Selection of a Particular Alternative:

Alternative #4 was selected to better define needs and cost effective solutions before funds are appropriated.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 49,500

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: 1% for Art Admin \$ 500

TOTAL COST \$ \_\_\_\_\_

Less other funds available \$ 50,000

Source \$ 0

Long Range Building Fund \$ 50,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: April, 1993

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_



Project Title Preliminary Design, University Expansion  
 Project Priority 28  
 Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other ☐ Planning

B. LOCATION: MT State University, Bozeman, Univ. of MT, Missoula, Eastern Montana College, Billings  
 (Check where appropriate)

- ☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. General Description:

The project develops the three bonded University system projects (Construct Engineering/Physical Sciences Building, MSU; Construct Business Administration Building, UM; Remodel Apsaruke Hall, EMC) through construction document phase. Refer to priorities #58, 59 & 61, respectively, of the Bonded program for specifics of each project. See General Narrative for breakdown of funds.

Impact on Existing Facilities:

Funding the preliminary design with the cash program defers the need to sell bonds and minimizes the impact on the Debt Service Account this biennium.

Number to be served by Facility: Students & faculty

Functional Space Requirements: N/A

Department MONTANA UNIVERSITY SYSTEM  
 Agency/Program MSU, UM & EMC

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Current debt service does not reduce significantly until 1996. The Engineering Physical Sciences Building and Business Administration Bldg have been the Regent's prime building requests since 1983. Remodel of Apsaruke renovates an existing building to address overcrowding described in EMC's request for an addition to the Special Education Bldg.

E. ALTERNATIVES CONSIDERED:

1. Include preliminary design in bonded program.
2. Fund preliminary design with cash program and fund construction phase work with bond sales.

Rationale for Selection of a Particular Alternative:

Alternative #2 makes the bond program more feasible by allowing the design process to begin immediately without incurring additional debt until the project is ready to be bid.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Local Campuses / A & E

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ 26,500

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 1,734,455

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: Code reviews \$ 70,530

Art \$ 10,150

TOTAL COST \$ 1,841,635

Less other funds available

Source \$ 0

\$ \_\_\_\_\_

Long Range Building Fund \$ 1,841,635

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: April, 1992 - January, 1993

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

GENERAL NARRATIVE MATERIAL

ALLOCATION OF FUNDS

Project/Description	Amount
CONSTRUCT ENGINEERING PHYSICAL SCIENCE COMPLEX, MSU	
Architectural/Engineering Fees	\$1,108,250
Site survey/soil testing	12,000
Code review	39,540
Percent for Art	<u>5,500</u>
TOTAL	\$1,165,290
CONSTRUCT BUSINESS ADMINISTRATION BUILDING, UM	
Architectural/Engineering Fees	\$ 559,355
Site survey/soil testing	14,500
Code review	26,850
Percent for Art	<u>4,000</u>
TOTAL	\$ 604,705
REMODEL ASPARUKE HALL, EMC	
Architectural/Engineering Fees	\$ 66,850
Site survey/soil testing	0
Code review	4,140
Percent for Art	<u>650</u>
TOTAL	\$ 71,640

Project Title Armory Additions & Alterations  
Project Priority 29  
Biennium 1992 - 1993

Department MILITARY AFFAIRS  
Agency/Program Army National Guard

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Armories, Statewide

(Check where appropriate)

- ☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project expands 19 armories around the State to accommodate mission change generated by the 1988 reorganization. Refer to the General Narrative for a summary of each project.

Impact on Existing Facilities:

The addition/renovation will make the existing facility more functional and extend the life of the buildings.

Number to be served by Facility: 50-150/unit

Functional Space Requirements: Varies

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The construction of armory additions is necessary to allow the local units to function properly. This project was brought about by the Federal Reorganization of the Montana Army National Guard from an Armored Cavalry Regiment to an Armored Brigade. It is essential that the units have adequate facilities for storage, office function, and classroom training. If the facilities requested in this project are not provided, there will not be adequate office space to conduct the training and administration activities necessary to bring the units to readiness for mobilization. The failure to provide adequate facilities will have deleterious effect on both recruiting and retention as well as overall unit morale and esprit de corps.

E. ALTERNATIVES CONSIDERED:

1. Leave the buildings as they are and train in other locations or rented space.
2. Construct new armories.
3. Expand the existing facilities to meet current criteria.

Rationale for Selection of a Particular Alternative:

Alternative #3 was selected, this being the means to solve the existing problem in the most economical way.



F. ESTIMATED COST OF PROJECT

Source of Estimate: Dept of Military Affairs

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 13,575,000

4. Architectural/Engineering Fees: \$ 1,052,000

5. Utilities: \$ 190,000

6. Landscaping & Site Development: \$ 758,000

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 730,000

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST

\$ 16,305,000

Less other funds available

Source 05009 \$ 16,155,000

\$ \_\_\_\_\_

Long Range Building Fund

\$ 150,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1993

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( 92-93 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ 119,400

Maintenance Expenses \$ 28,800

2. SECOND BIENNIUM ( 94-95 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ 129,400

Maintenance Expenses \$ 31,400

3. THIRD BIENNIUM ( 96-97 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ 140,500

Maintenance Expenses \$ 35,400

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

PROJECT LOCATION	EXISTING SIZE (SQ. FT.)	INCREASED SIZE (SQ. FT.)	NO. SERVED (\$)	FUNDING LRBF (\$)	FEDERAL (\$)	TOTAL
Dillon Armory	8,250	20,162	76	5,000	918,000	923,000
Miles City Armory	7,858	15,158	74	10,000	1,076,000	1,086,000
Glendive Armory	9,598	18,448	55	5,000	691,000	696,000
Deer Lodge Armory	8,118	18,843	56	5,000	791,000	796,000
Malta Armory	9,181	23,195	68	10,000	1,023,000	1,033,000
Hamilton Armory	8,906	22,511	76	10,000	998,000	1,008,000
Whitefish Armory	8,604	17,870	58	5,000	698,000	703,000
Missoula Armory	22,790	38,1793	20	10,000	1,510,000	1,520,000
Lewistown Armory	10,415	19,002	55	5,000	671,000	676,000
Sidney Armory	9,598	19,650	66	10,000	742,000	752,000
Plentywood Armory	9,102	19,228	66	10,000	752,000	762,000
Chinook Armory	9,912	20,030	66	10,000	748,000	758,000
Glasgow Armory	10,139	20,413	79	10,000	759,000	769,000
Anaconda Armory	7,982	17,960	58	10,000	741,000	751,000
Harlowton Armory	8,397	15,430	64	5,000	536,000	541,000
Culbertson Armory	13,500	17,466	55	5,000	322,000	327,000
Butte Armory	12,183	26,170	142	10,000	1,024,000	1,034,000
Havre Armory	12,780	31,354	154	10,000	1,380,000	1,390,000
Kalispell Armory	11,655	22,063	142	5,000	775,000	780,000
<b>TOTAL</b>	<b>198,968</b>	<b>403,132</b>	<b>1,730</b>	<b>150,000</b>	<b>16,155,000</b>	<b>16,305,000</b>

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Acquire Land & Preplan Armory  
Project Priority 30  
Biennium 1992 - 1993

Department MILITARY AFFAIRS  
Agency/Program Army National Guard

A. THIS PROJECT: (Check one)

☒ Is an Original Facility Major Maintenance Class  
☐ Improves an Existing Facility Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: National Guard Armory, Billings

(Check where appropriate)

☐ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will acquire land and complete Title I design services for a new armory in the Billings area.

E. ALTERNATIVES CONSIDERED:

1. Do nothing and look for a place to rent in 1992.
2. Continue current lease with state money.
3. Construct a new facility.
4. Acquire land and plan armory thru construction documents.

Impact on Existing Facilities:

None

Rationale for Selection of a Particular Alternative:

Alternative #4 puts the Department in a position of implementing the construction as soon as funds are made available.

Number to be served by Facility: 605

Functional Space Requirements: 61,809 sq ft

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

As a result of the 1988 reorganization of the Montana Army National Guard, the troop strength for the Billings area was increased by over 500 members. The federal government leased a facility for 4 years and stated that 4 years allows the state to program the necessary construction. At the end of 4 years, 1992, the state must assume the \$76,800 year lease or there will be no place for the units to train and store equipment.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Dept of Military Affairs

1. Land Acquisition: \$ 120,000

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ 3,900

Soil Testing: \$ 5,000

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ 210,000

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: Code review \$ 11,100

\$ \_\_\_\_\_

TOTAL COST \$ 350,000\*

Less other funds available \$ \_\_\_\_\_

Source 05009 \$ 200,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 150,000

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1993

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

\*Project reduced from construction request of \$4,800,000



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

This request is for a facility to house 305 personnel of an Infantry Battalion Headquarters, 112 personnel of an Infantry Company, 117 personnel of a Medical Unit, and 71 personnel of a Supply and Transportation Company. This facility will provide the administrative, indoor training, and equipment storage space required to accomplish the assigned readiness objectives of the National Guard.

This project is partially funded by the federal government. Design authority has been given by the federal government but because no site has been secured, design has not proceeded.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Expand Military Vehicle Compounds  
Project Priority 31  
Biennium 1992 - 1993

Department MILITARY AFFAIRS  
Agency/Program Army National Guard

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Statewide

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will expand the fenced perimeter of existing vehicle storage compounds.

E. ALTERNATIVES CONSIDERED:

1. Do nothing.

2. Build one large compound and centrally store all vehicles in one place.

3. Expand the existing compounds to meet the needs of each unit.

Impact on Existing Facilities:

Increased storage capacity to meet needs.

Rationale for Selection of a Particular Alternative:

Alternative #3 was selected because the State of Montana is responsible for the safekeeping of all equipment provided by the federal government to the National Guard and storage at each unit location is the most efficient way to maintain accountability.

Number to be served by Facility: 55-150/unit

Functional Space Requirements: N/A

## F. ESTIMATED COST OF PROJECT

Source of Estimate: Dept of Military Affairs

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 250,000

4. Architectural/Engineering Fees: \$ 25,000

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 5,000

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 280,000

Less other funds available

Source 05009 \$ 275,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 5,000

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1993

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Develop Alternate Water Supply  
Project Priority 32  
Biennium 1992 - 1993

Department ADMINISTRATION  
Agency/Program General Services Division

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other ☐

B. LOCATION: Capitol Complex, Helena

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will implement conservation measures and develop wells around the campus to provide an alternate water source for irrigation and building cooling. It will involve modifications to existing systems which reduce the dependency on city water.

Impact on Existing Facilities:

Development of project will allow the State to maintain the complex lawns and environmental comfort during the most severe drought conditions and in a more cost effective manner.

Number to be served by Facility: 2,440 staff & visitors

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The Capitol Complex uses a great deal of water not related to domestic consumption. The largest amounts of water are used for ground irrigation and for cooling equipment. The City of Helena has increased the price of water considerably over the past several years and restricts consumption during drought conditions.

E. ALTERNATIVES CONSIDERED:

1. Continue to pay for irrigation water from the City of Helena.
2. Provide a well system on the Capitol Square and eliminate the complex's largest user of domestic water.
3. Modify building cooling systems and provide strategically located wells around the complex as per the preliminary report, to reduce the need for city water for irrigation and cooling.

Rationale for Selection of a Particular Alternative:

Alternative #3 is considered as the most logical alternative because the project will pay for itself over a very short period of time. Lawn care and equipment cooling will not be dependent on the availability of water by the City of Helena during drought conditions.



## F. ESTIMATED COST OF PROJECT

Source of Estimate: General Services Division

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 42,370

4. Architectural/Engineering Fees: \$ 3,400

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 4,230

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 50,000

Less other funds available

Source 06528 \$ 50,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: April, 1992

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( 92-93 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ (31,000)

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( 94-95 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ (31,000)

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( 96-97 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ (31,000)

Maintenance Expenses \$ \_\_\_\_\_

# LONG RANGE BUILDING PROGRAM CAPITAL PROJECT REQUEST

Project Title Property Acquisition & Development  
 Project Priority 33  
 Biennium 1992 - 1993

Department ADMINISTRATION  
 Agency/Program General Services

## A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

## B. LOCATION: Capitol Complex, Helena

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

## C. DESCRIPTION OF FACILITY:

General Description:

This appropriation designates \$20,000 to purchase an option for land acquisition, should property become available. The balance of the appropriation will repair and seal parking lots around the Capitol Complex. Refer to the General Narrative for a list of parking lots to be repaired.

Impact on Existing Facilities:

Life of existing surfaces will be extended through proper maintenance to prevent moisture penetration and subsequent freeze/thaw problems.

Number to be served by Facility: 2,440 staff & visitors

Functional Space Requirements: N/A

## D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Should property become available, there are no means to purchase an option to acquire title, until the legislature appropriates acquisition funds. Parking lots and drives are deteriorated to the point where small patches are unstable; the holes spread and the entire surface is subject to subsurface moisture penetration. If the areas are not repaired, sealed and chipped to prevent further deterioration, future replacement is eminent.

## E. ALTERNATIVES CONSIDERED:

1. Fund the projects as listed to repair all of the damaged areas and set aside minimal funds for property acquisition.
2. Partially fund the project and repair the most critical areas, but risk further damage to those areas not repaired.
3. Do not fund the project at this time and risk a future total replacement.
4. Provide all funds anticipated for acquisition.

Rationale for Selection of a Particular Alternative:

Due to the nature of asphalt pavement, future break up of the surface will occur if repairs are not made soon. Alternative #1 prevents a major replacement project in the future. It also provides flexibility for land acquisition without obligating an undetermined amount of funds.

## F. ESTIMATED COST OF PROJECT

Source of Estimate: Department of Administration

1. Land Acquisition: \$ 20,000

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 88,317

4. Architectural/Engineering Fees: \$ 6,177

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ 8,520

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 123,014

Less other funds available

Source 05008 \$ 123,014\*

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

## G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: N/A

Number of Additional Personnel  
Required: NoneAdditional Funds Required when  
Project is in Full Operation:1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

\* See General Narrative

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

\* This project funds parking lot repairs at amount requested (\$103,014) and reduced land acquisition request from \$1,154,821 to \$20,000.

C. DESCRIPTION OF FACILITY: (Continued)

Executive Residence - west & east drive  
Scott Hart Building - west lot & corner of 6th and Roberts  
Mitchell Building - east and north parking lots  
Labor & Industry Bldg. - south lot  
Cogswell - east and west lots and drives  
S.R.S. Bldg - south and east lots  
Museum - east lot  
Fish, Wildlife & Parks - north lot  
Commerce - east and west lots  
Institutions - south lot  
1300 11th Avenue - east and west lots  
Old Liquor Warehouse - east and north lots.



Project Title Improve Pavement & Lighting  
Project Priority 34  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Yellowstone Airport, North of

West Yellowstone  
(Check where appropriate)  
☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will resurface the aircraft tiedown/ramp area and the entrance road; it will include paving for a new hangar taxiway. It will also provide federally required hold signs, directional signs, security signs, and emergency fire trucks/security radios. At the present time pilots do not have access to the runway lights. Under this project, radio controlled lights will be available allowing pilots to access the facility in a safe manner. The FAA has provided 90% funding for the entire project.

Impact on Existing Facilities:

Provides needed repairs and improves operational safety of the airport.

Number to be served by Facility: 8,000/year

Functional Space Requirements: N/A

Department COMMERCE  
Agency/Program Aeronautics Division

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Paved areas are 10-25 years old. Pavement damage incurred during the 1988 Yellowstone fires and subsequent repairs have left many uneven areas, including patches that allow moisture to penetrate the base material. Nominal strength of some parking areas should be improved. Taxiway paving to hangar areas can be accomplished reasonably when other paving is being done. The federal government (FAA) requires hold signs, signing, emergency radios and radio controlled access lights.

E. ALTERNATIVES CONSIDERED:

1. Postpone project.
2. Complete entire paving and improvement project.

Rationale for Selection of a Particular Alternative:

Alternative #2 was selected because the overlay of paved parking areas, roadways, and taxiway is deemed necessary to prevent a total pavement failure resulting in more costly repairs. It would not be cost effective to phase the paving project, and federal funds would not be available for the sign/radio upgrade because of the size of that portion of the work.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: <u>Morrison-Maierle &amp; Aeronautics</u>	
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>381,807</u>
4. Architectural/Engineering Fees:	\$ <u>76,361</u>
5. Utilities:	\$ _____
6. Landscaping & Site Development:	\$ _____
7. Equipment:	\$ _____
8. Contingencies:	\$ <u>45,817</u>
9. Other: <u>A&amp;E Supervisory Fee</u>	\$ <u>13,745</u>
	\$ _____
TOTAL COST	\$ <u>517,730</u>
Less other funds available	
Source <u>03068</u>	\$ <u>465,957</u>
	\$ _____
<u>06007</u>	\$ <u>51,773</u>
	\$ _____
Long Range Building Fund	\$ <u>0</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1993	
Number of Additional Personnel Required: None	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Remove Underground Storage Tanks  
Project Priority 35  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Administration

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility  
☒ Improves an Existing Facility  
☐ Other

☐ Major Maintenance Class  
☐ Replaces Existing Facility

B. LOCATION: Great Falls HQ, Missoula HQ, several hatcheries, Helena Warehouse, Lewis & Clark Caverns  
(Check where appropriate)

- ☒ Site on Owned Property  
☐ Site to be Selected  
☐ Site Already Selected

☐ Outside of 100 Year Flood Plain  
☐ Utilities Already Available  
☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will remove, inspect, and test, as necessary, underground storage tanks at various sites throughout the state, as required by law. Contaminated soil will be removed as necessary.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The Department currently has ownership of a number of underground storage tanks which were not installed to current health standards.

E. ALTERNATIVES CONSIDERED:

1. Remove tanks and abate spills as necessary.
2. No action.

Impact on Existing Facilities:

Bring tanks into compliance with EPA & state regulations.

Rationale for Selection of a Particular Alternative:

No action will mean violation of state and federal laws.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other:	\$	
3. Construction Cost	\$	130,500
4. Architectural/Engineering Fees:	\$	15,000
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	
9. Other: <u>A&amp;E Supervisory Fee</u>	\$	4,500
	\$	
TOTAL COST	\$	150,000
Less other funds available		
Source <u>02409</u>	\$	150,000
	\$	
Long Range Building Fund	\$	0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994	
Number of Additional Personnel Required: None	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$
Operating Expenses	\$
Maintenance Expenses	\$



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Headquarters Maintenance & Improvements  
Project Priority 36  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Administration

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class
- ☒ Improves an Existing Facility ☐ Replaces Existing Facility
- ☐ Other \_\_\_\_\_

B. LOCATION: Statewide

(Check where appropriate)  
☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will provide funds necessary to maintain existing Department Headquarters facilities and improve access for the mobility impaired.

Impact on Existing Facilities:

Extend life of building and improve handicapped access.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Various maintenance and repair projects are required for the Department's headquarters building. Repairs may include painting, roofing, or other heavy maintenance work. Renovations needed include the addition of handicap facilities at the Animal Shelter and the Headquarters Buildings.

E. ALTERNATIVES CONSIDERED:

- 1. Complete work as requested.
- 2. No action.

Rationale for Selection of a Particular Alternative:

Alternative #1 prevents further deterioration and brings facilities into compliance with accessibility standards.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 74,000

4. Architectural/Engineering Fees: \$ 8,500

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A&E Supervisor Fees \$ 2,500

\$ \_\_\_\_\_

TOTAL COST \$ 85,000

Less other funds available

Source 02409 \$ 85,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Department Property Development  
 Project Priority 37  
 Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
 Agency/Program Administration

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ II Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Statewide

(Check where appropriate)  
☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project provides funds to construct fences, roads, etc., for basic improvements to Department property statewide. Approximately \$60,000 of these funds will be used to improve handicapped access.

Impact on Existing Facilities:

Improve access and allow properties to be used for their intended purposes.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Department properties need basic improvements in order to develop them for the purposes intended. Properties such as game ranges and other Department lands and facilities need basic improvements, maintenance, and replacement in order to protect existing facilities and resources from deterioration.

E. ALTERNATIVES CONSIDERED:

1. Complete work as requested.
2. No action.

Rationale for Selection of a Particular Alternative:

Alternative #1 was chosen because Department properties will continue to deteriorate without project funding.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 356,400

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A & E Supervisory Fee \$ 3,600

\$ \_\_\_\_\_

TOTAL COST \$ 360,000

Less other funds available

Source 02410 \$ 360,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel

Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title State Parks Maintenance and Development  
Project Priority 38  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Recreation

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Statewide

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will address public demands for safety, health & resource, and site protection. About \$80,000 will be used for handicap protection. The State Park Futures Committee was appointed by the FWP director with the concurrence of the Governor and legislative leaders to make recommendations concerning the appropriate role, priorities and funding for state parks. This project represents a scaled down scope of the overall identified capital needs, however is commensurate with Montana's austere economic situation.

Impact on Existing Facilities:

Project will improve access and condition for the public using facilities as well as state's image.

Number to be served by Facility: 2,000,000 visitors

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The park sites across the state are in lamentable condition due to chronic under funding. Further, many park facilities are not accessible to the physically impaired. The needs far exceed this proposal. Specific sites will be selected on a priority basis to address public demands, safety and health, resource and site protection.

E. ALTERNATIVES CONSIDERED:

1. No action.

2. Partial action: Allow continued deterioration at the majority of state parks and fund capital improvements at the top four or five receiving heaviest visitation.

3. Development as proposed: The proposed Parks capital program of \$4.923 million represents only 25% of the identified critical needs. Those unfunded by the proposed program will require funding in future biennia.

Rationale for Selection of a Particular Alternative:

Alternative #3 assumes a responsible attitude toward preserving our resources from deterioration and represents the public's best interest.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ 60,000

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 4,390,100

4. Architectural/Engineering Fees: \$ 339,400

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisory \$ 133,500

\$ \_\_\_\_\_

TOTAL COST \$ 4,923,000

Less other funds available

Source \*see General Narrative \$ 4,923,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: December, 1994

Number of Additional Personnel  
Required: 3.0 FTE

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( 94-95 )

Personnel Services

\$ 50,000

Operating Expenses

\$ 0

Maintenance Expenses

\$ 25,000

2. SECOND BIENNIUM ( 96-97 )

Personnel Services

\$ 52,500

Operating Expenses

\$ 0

Maintenance Expenses

\$ 26,250

3. THIRD BIENNIUM ( 98-99 )

Personnel Services

\$ 55,125

Operating Expenses

\$ 0

Maintenance Expenses

\$ 27,563

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

PROJECT FUNDING	ACCOUNTING ENTITY	AMOUNT
License	02409	201,500
Land Trust	02410	100,000
Parks Earned Revenue	02411	200,000
LWCF	03098	320,000
D-J	03097	804,500
Highway Fuels	02422	168,000
Private	02051	200,000
Other	02981	2,929,000
TOTAL		4,923,000

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Fish Hatchery Maintenance  
Project Priority 39  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Fisheries

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ I Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Major repairs and small improvements are needed at hatcheries statewide.

B. LOCATION: Statewide

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will build fences, pave traffic surfaces, repair buildings, construct interpretive facilities, as well as complete other repair, maintenance and improvement projects.

E. ALTERNATIVES CONSIDERED:

1. No action.
2. Complete repairs and improvements.

Impact on Existing Facilities:

Improve condition of hatcheries.

Rationale for Selection of a Particular Alternative:

Alternative #2 prevents further deterioration.

Number to be served by Facility: N/A

Functional Space Requirements: N/A



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 143,200

4. Architectural/Engineering Fees: \$ 4,000

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisor Fees \$ 2,800

\$ \_\_\_\_\_

TOTAL COST \$ 150,000

Less other funds available

Source 02409 \$ 37,500

03097 \$ 112,500

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: Varies

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Fishing Access Site Improvements  
Project Priority 40  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Fisheries

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Statewide

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

Basic improvements to the Department's fishing access sites are necessary to protect the property investment and the environment of the sites. Approximately \$240,000 will be used for handicap improvements.

Impact on Existing Facilities:

Existing facilities will be upgraded in some cases.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The Department owns over 250 fishing access sites which require maintenance or upgrading. Some need fencing to protect them from livestock, and others require basic facilities such as roads, signs, boat ramps, and latrines. These improvements are necessary to provide public use and to minimize site degradation. Sites to receive improvements will be selected on a priority basis.

E. ALTERNATIVES CONSIDERED:

1. Complete repairs and improvements as requested.
2. No action.

Rationale for Selection of a Particular Alternative:

No action: Property and the environment of the sites will deteriorate.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 1,132,700

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisory Fees \$ 11,300

\$ \_\_\_\_\_

TOTAL COST \$ 1,144,000

Less other funds available

Source 03097 \$ 858,000

02409 \$ 286,000

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Department FISH, WILDLIFE & PARKS  
Agency/Program Fisheries

Project Title Motorboat Access Facilities  
Project Priority 4  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Combination of all of the above

B. LOCATION: Statewide

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

provide boat access and facilities at various locations statewide.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Boat access and related facilities need improvement. Federal programs require at least 10% of funding be used for boating improvements.

E. ALTERNATIVES CONSIDERED:

1. No action.
2. Complete project as requested.

Impact on Existing Facilities:

None

Rationale for Selection of a Particular Alternative:

Alternative #2 better serves the public.

Number to be served by Facility: N/A



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 265,345

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisory Fee \$ 2,655

\$ \_\_\_\_\_

TOTAL COST \$ 268,000

Less other funds available

Source 02409 \$ 67,000

03097 \$ 201,000

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title River Restoration  
Project Priority 42  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Fisheries

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other                     

B. LOCATION: statewide

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This program funding provides for the design, planning, and construction of projects by agencies, organizations, or private individuals. These projects improve fish habitat, fish passage, and riparian zones. It includes channel rehabilitation, channel stabilization, and the clean-up of trash and debris from river corridors.

Impact on Existing Facilities:

This program facilitates improved stream channels and fish habitat.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

A large percentage of Montana's watersheds are located on private property. These watersheds could be used for the production of fish by providing fish habitat. Most private land owners do not have the funds to make these improvements. Under strict rules, this program provides the funds necessary to make fish habitat improvements on private property.

E. ALTERNATIVES CONSIDERED:

No Action: Fish habitat will continue to deteriorate.

Rationale for Selection of a Particular Alternative:

See alternatives considered.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 258,415

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisory Fees \$ 2,585

\$ \_\_\_\_\_

TOTAL COST \$ 261,000

Less other funds available

Source 02149 \$ 261,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Fishing Access Site Acquisition  
Project Priority 43  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Fisheries

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Acquisition

B. LOCATION: Statewide

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will provide funding necessary to continue the fishing access acquisition program. It will provide sites statewide for fishing access and recreation. Fishing license revenue is earmarked by law for this acquisition program.

Impact on Existing Facilities:

This project will relieve overcrowding at some existing sites.  
NOTE: This project is about \$250,000 larger than normal due to a one-time funding change made in 1990. Revenue estimates are based on current law. The Department may be proposing changes.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Demand for access to fishing waters is constantly increasing. This project helps to eliminate that problem.

E. ALTERNATIVES CONSIDERED:

1. Accelerate Program.

2. Obtain access by other means, such as by less than fee title. This action is always explored, and is dismissed if: a) this action would increase landowner/user conflict, or b) the landowner is unwilling to transfer rights strong enough to protect continued public interest in the land.

Rationale for Selection of a Particular Alternative:

Alternative #2 is always used when it is in the best interest of the resource and the public. Funds are not available to accelerate program.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, wildlife & Parks staff

1. Land Acquisition: \$ 881,000

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ 881,000

Less other funds available  
Source 02415 \$ 881,000

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Wildlife Habitat Maintenance  
Project Priority 44  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Wildlife

A. THIS PROJECT: (Check one)

     Is an Original Facility      Major Maintenance Class  
x Improves an Existing Facility      Replaces Existing Facility  
     Other                     

B. LOCATION: statewide

(Check where appropriate)

x Site on Owned Property      Outside of 100 Year Flood Plain  
x Site to be Selected      Utilities Already Available  
     Site Already Selected      Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will provide funds to perform maintenance on game ranges, roads, fences, and other facilities owned by the Department.

E. ALTERNATIVES CONSIDERED:

No Action: Montana's prime recreational resources will degrade to a point of uselessness.

Rationale for Selection of a Particular Alternative:

See above. Revenue estimates are based on current law. The Department may be proposing changes which impact funding.

Impact on Existing Facilities:

Protection from unacceptable deterioration.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Montana's harsh climate takes its toll on property and facilities. Game ranges, roads, fences, and other property require upgrade and repair in order to remain presentable to the public. Properties require protection from erosion, livestock trespass, and degradation.

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 300,990

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisory Fee \$ 3,010

\$ \_\_\_\_\_

TOTAL COST \$ 304,000

Less other funds available

Source 02469 \$ 304,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Wildlife Habitat Acquisition  
Project Priority 45  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Wildlife

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Acquisition

B. LOCATION: Statewide

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will acquire an interest in land critical to wildlife through lease, easement, conservation easement, or fee title.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Critical lands for wildlife are being subject to conflicting uses. Acquisition of interest in certain critical areas will aid the Department in meeting its goals and objectives for the public as stated in the strategic plan.

E. ALTERNATIVES CONSIDERED:

No Action: The Department will not be able to meet the recreation demands of the public and maintain wildlife populations.

Rationale for Selection of a Particular Alternative:

See above. NOTE: Revenue estimates are based on current law. The Department may be proposing changes which impact funding.

Impact on Existing Facilities:

None

Number to be served by Facility: N/A

Functional Space Requirements: N/A



F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ 4,923,356

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: \$ \_\_\_\_\_

TOTAL COST \$ 4,923,356

Less other funds available

Source 02114 \$ 4,923,356

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Waterfowl Habitat Enhancement  
Project Priority 46  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Wildlife

A. THIS PROJECT: (Check one)

- ☒ Is an Original Facility ☒ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Acquisition

B. LOCATION: Statewide

(Check where appropriate)

- ☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will include dike construction, island construction, water control structures, and fence construction to control livestock grazing. It includes the use of leases, easements, and acquisition to improve existing wetland/upland complexes.

Impact on Existing Facilities:

This project will improve waterfowl habitats.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Waterfowl production is low. Production is best improved by providing additional habitat. This will also increase recreational hunting opportunities.

E. ALTERNATIVES CONSIDERED:

No Action: Waterfowl in Montana will continue to decrease.

Rationale for Selection of a Particular Alternative:

See alternatives considered.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 395,545

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: A/E Supervisory Fees \$ 3,955

\$ \_\_\_\_\_

TOTAL COST \$ 399,500

Less other funds available

Source 02085 \$ 399,500

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Bighorn Sheep Habitat Acquisition  
Project Priority 47  
Biennium 1992 - 1993

Department FISH, WILDLIFE & PARKS  
Agency/Program Wildlife

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other Acquisition

B. LOCATION: Statewide

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will provide habitat for Bighorn sheep by purchase, conservation easement, leases, or land exchange. In some cases, access may be improved through negotiation, purchase, or easement. Other activities that may be undertaken with these funds include habitat improvement programs and major maintenance on existing properties.

Impact on Existing Facilities:

None

Number to be served by Facility: N/A

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Key habitat for Bighorn sheep is being lost to other uses, which prevents future expansion of sheep population.

E. ALTERNATIVES CONSIDERED:

No Action: Habitat will continue to be lost.

Rationale for Selection of a Particular Alternative:

See alternatives considered.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Fish, Wildlife & Parks staff

1. Land Acquisition: \$ 48,500

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ \_\_\_\_\_

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 48,500

Less other funds available

Source 02086 \$ 48,500

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Maintenance Projects  
Project Priority 48  
Biennium 1992 - 1993

Department HIGHWAYS  
Agency/Program Maintenance and Equipment Division

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ II Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other Repair and maintain facilities

B. LOCATION: Statewide

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will provide general repair and improvements to many of the 650 buildings operated by the Department of Highways. Funds will maintain the facilities and structures in usable and energy efficient condition.

Impact on Existing Facilities:

Project will improve facilities and correct deficiencies to prevent further deterioration.

Number to be served by Facility: Dept of Highways

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Funds are needed to facilitate repairs and perform preventative maintenance on existing department buildings. Repairs include replacement of heaters, windows, garage doors, and boilers. Electrical, plumbing, siding and painting problems are also addressed. These problems are identified by a department facilities management system which also estimates the cost based on building type and square footage.

E. ALTERNATIVES CONSIDERED:

1. Do nothing and allow facilities to deteriorate.
2. Perform only minor maintenance on an as needed basis.
3. Identify current and potential building maintenance needs and address those needs in a systematic program.

Rationale for Selection of a Particular Alternative:

Alternative #3 is preferred. The department is dedicated to becoming proactive in its management of facilities. This is possible through the department's current program.

F. ESTIMATED COST OF PROJECT

Source of Estimate: Historical and Research

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 280,000

4. Architectural/Engineering Fees: \$ 5,000

5. Utilities: \$ 15,000

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ 98,500

8. Contingencies: \$ 30,000

9. Other: A/E Supervisory Fees \$ 15,000

\$ \_\_\_\_\_

TOTAL COST \$ 443,500

Less other funds available  
Source 02422 \$ 443,500

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1993

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

The Highway Department maintains various facilities virtually in every part of the state. These facilities include Section Headquarters for 133 maintenance crews, 11 District and Area offices, (all with attached repair garages), GVW weigh stations, numerous equipment (loader) sheds and sandhouses detached from section headquarters. In Helena the Department maintains a fabrication shop, sign shop and carpentry buildings, multiple buildings at the fairgrounds and a hangar building. Total Buildings are in excess of 650.

This program's objective is to maintain our buildings in a usable and energy efficient condition. This program will include items such as repairing and replacing overhead garage doors, replacing water pumps, adding insulation to decrease energy costs, adding storm windows, upgrading wiring, road oil storage tanks, furnaces and roofs.



Project Title Construct & Expand Maintenance Buildings  
Project Priority **49**  
Biennium 1992 - 1993

Department HIGHWAYS  
Agency/Program Maintenance & Equipment

A. THIS PROJECT: (Check one)

☒ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Billings, Whitefish, Helena

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will develop three maintenance sites as described in the General Narrative.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Current Billings location is remote from the road section for which they are responsible, thus wasting time and fuel, and delaying response to emergencies. Four lane road development/expansion dictates section facility requirement in Whitefish. Finally, Helena facility needs to be relocated closer to the interstate to improve response time and minimize security problems.

E. ALTERNATIVES CONSIDERED:

1. Continue status quo.
2. Renovate and expand existing facilities.
3. Relocate to more appropriate location, relocate building where feasible and construct new buildings to meet needs.

Impact on Existing Facilities:

This project will relieve overcrowding and allow deteriorated site at Olney to operate as a winter satellite facility.

Rationale for Selection of a Particular Alternative:

Alternative #3 was selected as it relieves overcrowding and increases the level of service for the least amount of money.

Number to be served by Facility: 44

Functional Space Requirements: 32,142 sq ft

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate:	<u>Historical Data / A &amp; E</u>
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>657,880</u>
4. Architectural/Engineering Fees:	\$ <u>37,600</u>
5. Utilities:	\$ <u>20,000</u>
6. Landscaping & Site Development:	\$ <u>10,000</u>
7. Equipment:	\$ _____
8. Contingencies:	\$ <u>66,180</u>
9. Other: <u>A/E Supervisory Fees</u>	\$ <u>19,340</u>
<u>Building Relocation</u>	\$ <u>34,000</u>
TOTAL COST	\$ <u>845,000</u>
Less other funds available	
Source <u>Previous Appropriations</u>	\$ <u>130,000</u>
<u>02422</u>	\$ <u>715,000</u>
Long Range Building Fund	\$ <u>0</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: July, 1992	
Number of Additional Personnel Required: None	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>92-93</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ <u>3,400</u>
Maintenance Expenses	\$ <u>250</u>
2. SECOND BIENNIUM ( <u>94-95</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ <u>7,500</u>
Maintenance Expenses	\$ <u>1,000</u>
3. THIRD BIENNIUM ( <u>96-97</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ <u>8,500</u>
Maintenance Expenses	\$ <u>1,600</u>

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY: (Continued)

LOCATION/DESCRIPTION

PROJECT COST

BILLINGS

140,000

The project will construct a 9 stall equipment garage and a sandhouse. It will include all utilities and fuel distribution facilities. The project will also use \$130,000 appropriated for the project in 1985.

WHITEFISH

165,000

The project will construct a 4 bay section garage with office.

HELENA

410,000

The project will relocate 3 buildings from the current fairgrounds site, and will construct a new 3 stall fully equipped garage and a 9 stall heated equipment garage.

TOTAL

\$ 715,000

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Equipment Storage Buildings  
Project Priority 50  
Biennium 1992 - 1993

Department HIGHWAYS  
Agency/Program Maintenance & Equipment

A. THIS PROJECT: (Check one)

☒ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Great Falls, Rainy Lake, Plentywood,  
Lost Trail Pass and Lincoln  
(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will construct new, and expand existing equipment storage at various locations statewide. Refer to the General Narrative for description of projects.

Impact on Existing Facilities:

This project will allow for indoor storage of equipment and improve working conditions.

Number to be served by Facility: 20

Functional Space Requirements: 13,608 sq. ft.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

There is inadequate space for storage of equipment and inventories, and inadequate office space. Larger equipment will not fit in some existing garages, and equipment stored in shops causes congestion and interferes with efficient equipment repair activities. In some instances, relocation will improve response time.

E. ALTERNATIVES CONSIDERED:

1. Do nothing.
2. Build new or additions to existing facilities.
3. Replace garages with new facilities.

Rationale for Selection of a Particular Alternative:

Alternative #2 will preserve equipment and hydraulic systems in severe weather, thus providing the greatest cost benefit in the long run.



F. ESTIMATED COST OF PROJECT

Source of Estimate: Historical Data / A & E

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 478,670

4. Architectural/Engineering Fees: \$ 32,000

5. Utilities: \$ 27,000

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ 7,000

8. Contingencies: \$ 49,303

9. Other: A/E Supervisor Fee \$ 14,365

02422 \$ \_\_\_\_\_

TOTAL COST \$ 608,338

Less other funds available

Source 1989 Appropriations \$ 39,813

\$ 568,525

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1994

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( 92-93 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ 3,600

Maintenance Expenses \$ 700

2. SECOND BIENNIUM ( 94-95 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ 6,200

Maintenance Expenses \$ 800

3. THIRD BIENNIUM ( 96-97 )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ 6,250

Maintenance Expenses \$ 1,100

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY: (Continued)

PROJECT LOCATION/DESCRIPTION

PROJECT  
COST

EAST SIDE OF GREAT FALLS

\$ 187,600

Construct a 3,400 sq. ft., 4 stall garage with office and sewer, water, and fuel systems.

RAINY LAKE

\$ 100,000

Construct a 2,640 sq. ft., 3 stall garage and connect to existing utilities.

PLENTYWOOD

\$ 108,500

Relocate existing building and construct a 2,640 sq. ft., 3 stall garage with office.

LOST TRAIL PASS

\$ 115,925

Construct a 2,640 sq. ft., 3 stall garage with new septic system, and connect to existing well.

LINCOLN

\$ 56,500

Construct a 2,288 sq. ft., 3 stall garage in lieu of sandhouse approved last biennium to better utilize funds. Funds were appropriated during the 50th Legislature for the construction of 3 sandhouses. Two sandhouses have been constructed from the appropriation, the first at North Montana Avenue and Lincoln Road and the second at the Helena Highway Department Headquarters. The third, slated for construction in Lincoln, has not been built. Through assessment of Highway Department Maintenance Division requirements, the Architecture and Engineering Division and Highway Department Personnel have determined that the need for an Equipment Storage Garage exceeds the need for a sandhouse at the Lincoln location. The Highway Department would like to reappropriate the remaining funds and add additional funds for use in the construction of an Equipment Storage Garage at the Lincoln site. Project will reappropriate funds from last session.

TOTAL

\$ 568,525

Project Title Renovate & Expand Job Service  
Project Priority **51**  
Biennium 1992 - 1993

Department LABOR AND INDUSTRY  
Agency/Program Job Service Division

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Great Falls Job Service, Great Falls

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will correct/minimize problems due to soil movement by abandoning the basement, and constructing a one story, ground level addition to the north side of the building.

Impact on Existing Facilities:

The project corrects structural and repair problems in existing basement and addresses functional improvement and expansion needs for the facility.

Number to be served by Facility: 38

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The existing basement floor sits on an unstable soil strata that moves up and down with seasonal changes in the water table. Currently movement of the basement floor is damaging building components, shifting walls, creating cracks and damaging finishes. Major repairs are required to keep the basement area intact and usable. The basement level interior concrete block walls will be removed so the ground movement will not continue to damage the structure. Adding on to the first floor replaces currently inhabited basement space, which will be abandoned and utilized as dead storage area.

E. ALTERNATIVES CONSIDERED:

1. Remove selected basement block walls and add tie beams. Abandon the basement and add new replacement office space on to the north side of the main floor.
2. Remove the basement floor and walls, excavate and remove the soil below the existing floor and install a structural floor system with crawl space and sump drains. Reconstruct, refinish and restore all the existing basement area for continued existing use.

Rationale for Selection of a Particular Alternative:

Alternative #1 is least costly, improves handicapped accessibility and mitigates site drainage problems. It also provides daylighted, better quality space for division employees, and expansion capability to better serve the agency and the public.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Architecture & Engineering

1. Land Acquisition:	\$	_____
2. Preliminary Expenses:	\$	_____
Site Survey:	\$	_____
Soil Testing:	\$	<u>1,500</u>
Other:	\$	_____
3. Construction Cost	\$	<u>253,810</u>
4. Architectural/Engineering Fees:	\$	_____
5. Utilities:	\$	<u>29,440</u>
6. Landscaping & Site Development:	\$	_____
7. Equipment:	\$	_____
8. Contingencies:	\$	<u>25,250</u>
9. Other: _____	\$	_____
_____	\$	_____
TOTAL COST	\$	<u>310,000</u>
Less other funds available		_____
Source <u>03128</u>	\$	<u>310,000</u>
_____	\$	_____
Long Range Building Fund	\$	<u>0</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: June, 1993

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____



Project Title Construct 2 Greenhouses  
Project Priority 52  
Biennium 1992 - 1993

Department STATE LANDS  
Agency/Program Forestry Division

A. THIS PROJECT: (Check one)

☒ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: State Forest Tree Nursery, Missoula

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will construct two separate greenhouses:  
1. 30' x 96' production greenhouse with frame construction headhouse to meet the need for containerized tree seedlings.....\$107,800  
2. 30' x 144' greenhouse for potted Western Larch seed orchard.....84,100  
TOTAL .....\$191,900

Impact on Existing Facilities:

Greenhouses would be constructed on land currently available at the nursery without impact on existing buildings. Utilities are available at the site and will be extended to the buildings.

Number to be served by Facility: N/A

Functional Space Requirements: 7,870

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Production Greenhouse: Increased demand for containerized seedlings for State Lands reforestation and conservation planting indicate an additional greenhouse is needed. The present greenhouse facility is being double cropped to produce enough seedling but this cropping system is sacrificing seedling quality for increased production. The additional greenhouse will allow for the production of additional species in containers, for which there is a growing demand. The President's "Tree Planting Program" will (continued on General Narrative)

E. ALTERNATIVES CONSIDERED:

1. Construct both greenhouses.
2. Rely on outdoor soil based orchard for production and seed orchard.
3. Construct only one greenhouse.

Rationale for Selection of a Particular Alternative:

Alternative #1 meets the needs for both production and the seed orchard. (continued on General Narrative)

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate:	<u>Fox-Ballas-Barrow /A&amp;E</u>
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>155,830</u>
4. Architectural/Engineering Fees:	\$ <u>13,300</u>
5. Utilities:	\$ <u>2,000</u>
6. Landscaping & Site Development:	\$ _____
7. Equipment:	\$ _____
8. Contingencies:	\$ <u>16,090</u>
9. Other: <u>A/E Supervisory Fees</u>	\$ <u>4,680</u>
	\$ _____
TOTAL COST	\$ <u>191,900</u>
Less other funds available	
Source <u>02449</u>	\$ <u>134,100</u>
<u>02031</u>	\$ <u>57,800</u>
Long Range Building Fund	\$ <u>0</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: March, 1992

Number of Additional Personnel  
Required: .9 FTE

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( 92-93 )

Personnel Services	\$ <u>26,400</u>
Operating Expenses	\$ <u>18,700</u>
Maintenance Expenses	\$ <u>1,300</u>

2. SECOND BIENNIUM ( 94-95 )

Personnel Services	\$ <u>22,100</u>
Operating Expenses	\$ <u>17,200</u>
Maintenance Expenses	\$ <u>1,300</u>

3. THIRD BIENNIUM ( 96-97 )

Personnel Services	\$ <u>22,600</u>
Operating Expenses	\$ <u>17,700</u>
Maintenance Expenses	\$ <u>1,300</u>

GENERAL NARRATIVE MATERIAL

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED: (continued)

increase the demand for planting stock. The additional greenhouse will enable the Division to produce up to 250,000 additional reforestation seedling and/or 70,000 conservation seedlings.

Seed Orchard Nursery: Establishment of a Western Larch seed orchard is called for in the State Lands Tree Improvement Plan. The purpose is to produce genetically improved seed for reforestation of State lands, resulting in faster-growing trees that will produce greater income to the school trust funds.

Rationale for Selection of a Particular Alternative: (continued)

Containerized seedlings are produced in as little as 9 months as compared to over 3 years for bare root seedlings. This method provides better control over production, minimizes waste and increases flexibility in the operation to meet expanding needs for reforestation, windbreaks and shelter belts. A potted indoor orchard provides protection against spring frosts which would kill the cones produced most years. Other benefits include isolation from contaminating pollen, flexibility to alter breeding zones, ease of genetic upgrading, and ability to promote rapid flowering.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title \_\_\_\_\_ Federal Spending Authority \_\_\_\_\_  
Project Priority 53  
Biennium \_\_\_\_\_ 1992 - 1993

Department MILITARY AFFAIRS  
Agency/Program Army National Guard

A. THIS PROJECT: (Check one)

\_\_\_\_ Is an Original Facility \_\_\_\_\_ Major Maintenance Class  
\_\_\_\_ Improves an Existing Facility \_\_\_\_\_ Replaces Existing Facility  
\_\_\_\_ x Other \_\_\_\_\_

B. LOCATION: Various Locations, Statewide

(Check where appropriate)

\_\_\_\_ x Site on Owned Property \_\_\_\_\_ Outside of 100 Year Flood Plain  
\_\_\_\_ x Site to be Selected \_\_\_\_\_ Utilities Already Available  
\_\_\_\_ Site Already Selected \_\_\_\_\_ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This appropriation allows federal funds to be used for maintenance and improvement projects over \$25,000 in any of the Department of Military Affairs facilities and sites.

Impact on Existing Facilities:

This appropriation could improve existing facilities primarily in terms of maintenance.

Number to be served by Facility: All Guard members

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

At various times federal funds become available to the state. These funds are used for maintenance, to match existing State funds, or to fund a project authorized by the Federal Government. We are unable to spend these funds without legislative spending authority.

E. ALTERNATIVES CONSIDERED:

1. Ask for authority.
2. Operate under existing conditions.

Rationale for Selection of a Particular Alternative:

Alternative #1 allows department to utilize other sources of funding to assist with the maintenance and improvement of state owned facilities.



F. ESTIMATED COST OF PROJECT

Source of Estimate: Department of Military Affairs

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ \_\_\_\_\_

Soil Testing: \$ \_\_\_\_\_

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 300,000

4. Architectural/Engineering Fees: \$ \_\_\_\_\_

5. Utilities: \$ \_\_\_\_\_

6. Landscaping & Site Development: \$ \_\_\_\_\_

7. Equipment: \$ \_\_\_\_\_

8. Contingencies: \$ \_\_\_\_\_

9. Other: \$ \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL COST \$ 300,000

Less other funds available

Source 05009 \$ 300,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: Varies

Number of Additional Personnel Required: None

Additional Funds Required when Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

2. SECOND BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

3. THIRD BIENNIUM ( N/A )

Personnel Services \$ \_\_\_\_\_

Operating Expenses \$ \_\_\_\_\_

Maintenance Expenses \$ \_\_\_\_\_

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Expand Industries Facilities  
Project Priority 54  
Biennium 1992 - 1993

Department INSTITUTIONS  
Agency/Program Montana State Prison

A. THIS PROJECT: (Check one)

☒ Is an Original Facility Major Maintenance Class  
☒ Improves an Existing Facility Replaces Existing Facility  
☐ Other

B. LOCATION: Montana State Prison, Deer Lodge

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☒ Utilities Already Available  
☐ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will expand the Motor Vehicle Maintenance Facility by 5,000 sq. ft. to provide space for rebuilding passenger buses for handicapped and elderly Montanans in cooperation with the Department of Commerce and construct a 20,000 sq. ft. pre-engineered (continued on General Narrative)

Impact on Existing Facilities:

Construction of these buildings will allow more inmates to develop vocational skills, to be better prepared to become productive citizens upon release. The Motor Vehicle expansion will use the existing facilities' restrooms, supply/tool rooms and support areas.

Number to be served by Facility: 15-20 + Vo-Tech

Functional Space Requirements: 25,000 sq. ft.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

At the present time only small segments of the High side population have the opportunity for any type of vocational training and handicap training is non-existent. The Division of Commerce has requested that the Industries Training Program rebuild 24 passenger buses per year. Current facilities are inadequate to develop this program which upgrades transportation for elderly and handicapped people in rural Montana. (continued on General Narrative)

E. ALTERNATIVES CONSIDERED:

1. Use existing space and resources at the expense of ongoing prison operations without increasing training/employment assignments for inmates.
2. Construct the building with private contractors at considerably greater cost.
3. Construct the building with inmate labor and civilian supervision.

Rationale for Selection of a Particular Alternative:

Alternative #3 provides the greatest opportunity to provide more appropriate training to improve rehabilitation of inmates and improve local community bus services. Private sector construction within the secure perimeter presents security concerns which increases overall costs.

F. ESTIMATED COST OF PROJECT

Source of Estimate:	MT. State Prison Staff	
1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other: Permits	\$	5,000
3. Construction Cost	\$	285,940
4. Architectural/Engineering Fees:	\$	19,156
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	22,880
9. Other: Misc. Equipment	\$	3,000
	\$	
TOTAL COST	\$	335,976
Less other funds available		
Source See Narrative	\$	335,976
	\$	
Long Range Building Fund	\$	0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: January, 1993	
Number of Additional Personnel Required: 4.5 FTE	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( 92-93 )	
Personnel Services	\$ 102,713
Operating Expenses	\$ 9,770
Maintenance Expenses	\$ 1,360
2. SECOND BIENNIUM ( 94-95 )	
Personnel Services	\$ 246,512
Operating Expenses	\$ 13,770
Maintenance Expenses	\$ 2,360
3. THIRD BIENNIUM ( 96-97 )	
Personnel Services	\$ 246,512
Operating Expenses	\$ 13,770
Maintenance Expenses	\$ 2,460

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

C. DESCRIPTION OF FACILITY: (Continued)

steel building in the high security compound for Vocational training & industries. Cost estimates for both buildings are based on the use of inmate labor for their construction.

Motor Vehicle Repair Facility.....	\$ 63,976
High Security Industry Facility.....	<u>272,000</u>
TOTAL .....	\$335,976

D. EXPLANATION OF PROBLEM BEING ADDRESSED: (Continued)

The expansion of the Motor Vehicle Maintenance facility is primarily for bus rebuilding for the Transportation Division of the Department of Commerce. The Division of Transportation will reassign the buses to rural areas of Montana, thus reducing the costs to the taxpayer. Our experience in bus rebuilding, using inmate labor, indicates that a bus can be rebuilt for approximately one-tenth the new purchase cost. A pre-engineered steel addition to the existing industries building allows expanded use of existing support services. The shared support areas include classrooms, restrooms, accounting/purchasing, time share of equipment, and support staff.

The High Side Compound of Montana State Prison contains upwards of one-third of the inmates but only affords schooling or work and training opportunities to less than 50% of them. It is critical that training and education opportunities be expanded to increase the potential of these inmates to enter the Montana work force to help keep them from becoming repeat offenders and to provide them with constructive activity while in prison.

No training of any magnitude is afforded to handicapped individuals and this building will be accessible to them.

FUNDING SOURCE

Project:	Account Entity	Amount
High Security Industries Facility	06533	272,000
Motor Vehicle Repair Facility	03057	14,000
	06533	24,988
	06534	<u>24,988</u>
TOTAL		335,976



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Various Improvements  
Project Priority 55  
Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program University of Montana

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Projects over \$25,000 must receive legislative authorization before work can be done on state owned facilities.

B. LOCATION: University of Montana, Missoula

(Check where appropriate)

☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The appropriation allows the University of Montana to address a wide variety of improvement and maintenance projects throughout their campus with funds from various sources. Refer to the General Narrative for description of Projects and Funding Sources.

E. ALTERNATIVES CONSIDERED:

1. Defer the requested renovations until the state funds the projects.
2. Grant authority.

Impact on Existing Facilities:

Projects will enhance and/or upgrade campus facilities without incurring operational expenses.

Rationale for Selection of a Particular Alternative:

Granting of spending authority would allow projects to proceed as funds are secured.

Number to be served by Facility: N/A

Functional Space Requirements: N/A

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: <u>UM Facility Services</u>	
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>1,226,440</u>
4. Architectural/Engineering Fees:	\$ <u>170,000</u>
5. Utilities:	\$ _____
6. Landscaping & Site Development:	\$ <u>910,000</u>
7. Equipment:	\$ _____
8. Contingencies:	\$ <u>234,960</u>
9. Other: <u>A/E Supervisory Fee</u>	\$ <u>43,200</u>
	\$ _____
TOTAL COST	\$ <u>2,584,600</u>
Less other funds available	
Source <u>See General Narrative</u>	\$ <u>2,584,600</u>
	\$ _____
Long Range Building Fund	\$ <u>0</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: <u>Varies</u>	
Number of Additional Personnel Required: <u>None</u>	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
2. SECOND BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____
3. THIRD BIENNIUM ( <u>N/A</u> )	
Personnel Services	\$ _____
Operating Expenses	\$ _____
Maintenance Expenses	\$ _____

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

PROJECT/DESCRIPTION	SOURCE	ACCOUNTING ENTITY	AMOUNT
RENOVATION OF FOSSIL STORAGE ROOM 320 IN SCIENCE COMPLEX	Bldg Fee Federal	72100 3216x	38,000 62,000
This project has \$38,000 of Student Building Fee funds identified and is seeking an additional \$62,000 to upgrade storage cabinets.			
RENOVATION OF WASHINGTON-GRIZZLY STADIUM LOCKER ROOM	Private	32101	500,000
This project will renovate space under the stadium into locker rooms, weight training and classrooms.			
RENOVATION OF CENTENNIAL OVAL	Private	32101	1,000,000
This project will reconstruct the Oval and Mall from Arthur Avenue to Main Hall, funding will be solicited from Facilities Services and/or private donations.			
STUDENT BUILDING FEE PROJECTS OVER \$25,000	Bldg Fees	72100	175,000
This project requests blanket authority for student building projects over \$25,000 for the 1992-1993 biennium for a total of \$175,000. Projects have not yet been identified, however a report of how the funds were spent would be submitted to the next legislature.			
REPLACE UNDERGROUND STORAGE TANKS	Fac. Services	331xx	180,600
The project will remove motor pool underground tanks to preserve the recharge zone for Missoula's aquifer.			
CONSTRUCT BACK-UP STEAM LINE TO U CENTER AND ABER HALL	Auxiliary Fac. Services	341xx 72105	25,000 75,000
The project will allow the two buildings to operate while the steam system servicing the remainder of the campus is shut down for repairs.			

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

PROJECT/DESCRIPTION	SOURCE	ACCOUNTING ENTITY	AMOUNT
<p>RENOVATE BOILERS TO ALTERNATE FUEL</p> <p>The project will allow the heating plant to serve the campus in the event natural gas is not available.</p>	Fac. Services	33103	229,000
<p>RENOVATE TENNIS COURTS</p> <p>The project will replace/repair deteriorated playing surfaces.</p>	Private Auxiliary	32101 71100	240,000 60,000



Project Title Remodel Student Union Building  
Project Priority 56  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)  
   Is an Original Facility    Major Maintenance Class  
   Improves an Existing Facility    Replaces Existing Facility  
   Other   

B. LOCATION: Western Montana College, Dillon

(Check where appropriate)  
   Site on Owned Property    Outside of 100 Year Flood Plain  
   Site to be Selected    Utilities Already Available  
   Site Already Selected    Access Already Available

C. DESCRIPTION OF FACILITY:  
General Description:  
  
The project will remodel interior spaces and construct an addition for Student and Auxiliary Service Enterprises.

Impact on Existing Facilities:  
  
This project will change the existing Student Union Building significantly. When this project is completed, it will have a very positive impact on the college.

Number to be served by Facility: 1,200

Functional Space Requirements: 16,200

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program Western Montana College

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:  
  
Currently the existing Student Union Building either offers very limited space for some needed student services or doesn't offer them at all. This project will renovate old inefficient space as well as provide new serviceable space.

E. ALTERNATIVES CONSIDERED:  
  
1. Leave as is.  
2. Do remodeling.

Rationale for Selection of a Particular Alternative:  
  
Alternative #2 was selected in an attempt to provide the needed services to the students at WMC.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: WMC Facilities Staff

1. Land Acquisition:	\$	
2. Preliminary Expenses:	\$	
Site Survey:	\$	
Soil Testing:	\$	
Other:	\$	
3. Construction Cost	\$	460,200
4. Architectural/Engineering Fees:	\$	66,000
5. Utilities:	\$	
6. Landscaping & Site Development:	\$	
7. Equipment:	\$	
8. Contingencies:	\$	60,000
9. Other: <u>A/E Supervisory Fees</u>	\$	13,800
	\$	
TOTAL COST	\$	600,000
Less other funds available		
Source	\$	
	\$	71601
Long Range Building Fund	\$	0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: 1995

Number of Additional Personnel  
Required: None

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( N/A )

Personnel Services

\$

Operating Expenses

\$

Maintenance Expenses

\$

2. SECOND BIENNIUM ( N/A )

Personnel Services

\$

Operating Expenses

\$

Maintenance Expenses

\$

3. THIRD BIENNIUM ( N/A )

Personnel Services

\$

Operating Expenses

\$

Maintenance Expenses

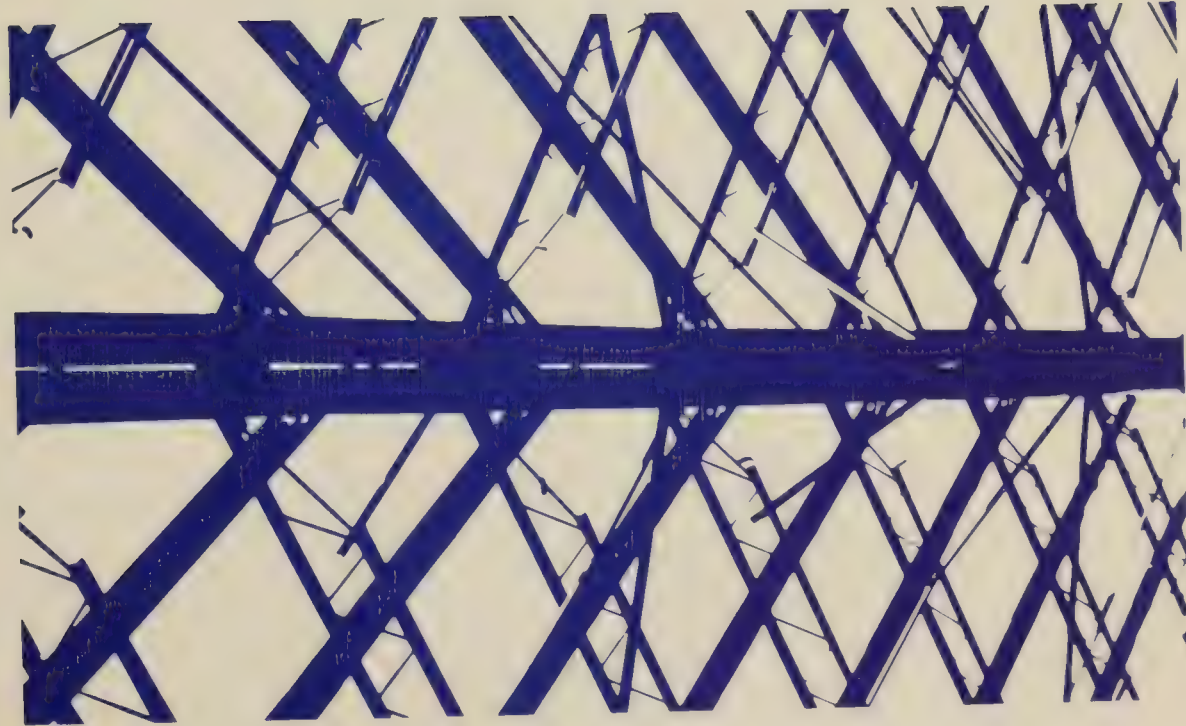
\$

GENERAL NARRATIVE MATERIAL

Student Government and Student Services needs are changing. This building requires updating of all facilities from restrooms to day care and snack bar. Handicap access was not planned for when the building was constructed in 1957. This project will renovate about 10,200 sq. ft. and construct 6,000 sq. ft. of new space. The project will provide a snack bar and multi-purpose areas on lower floor, and includes remodeling of the book store, day care, restrooms, study lounges, post office and club offices.







# Bonded Program



Project Title Major Expansion  
 Project Priority 57  
 Biennium 1992 - 1993

Department INSTITUTIONS  
 Agency/Program Corrections Division

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☐ Replaces Existing Facility  
☒ Other \_\_\_\_\_

B. LOCATION: Montana State Prison, West of Deer Lodge

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will reconfigure the Maximum Security compound to create a new Close/Maximum Security compound. It will construct 2 High/Close Security housing units and all necessary support facilities to deter interaction between compounds. Refer to the General Narrative for further description of the project. Funding reflects approximately 90% being bid to a private contractor, and 10% being spent on work constructed with inmate labor working under trade supervision and assistance.

Impact on Existing Facilities:

Construction of 218 High/Close Security beds and support facilities will provide the Prison the resources and flexibility to adequately address anticipated increase in the inmate population.

Number to be served by Facility: 216+

Functional Space Requirements: N/A

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

Overcrowding problems in the Correctional system continue to plague the State. Currently MSP houses over 1,140 inmates in space designed for 754. The existing facilities simply cannot accommodate additional inmates. Support Services were only built to accommodate 1,150-1,200 inmates and must be expanded if new housing units are constructed on the MSP campus.

E. ALTERNATIVES CONSIDERED:

A variety of community based alternatives are recommended to be implemented to handle low security inmates. This option addresses only High/Close Security inmates and is the only viable means of address our projected inmate population problems.

Rationale for Selection of a Particular Alternative:

This is the least costly option since it utilizes existing resources on the MSP campus. "Stand-alone" construction at another site would be significantly more costly in terms of construction and operations.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate:	<u>A&amp;E / MSP staff</u>
1. Land Acquisition:	\$ <u>                    </u>
2. Preliminary Expenses:	\$ <u>                    </u>
Site Survey:	\$ <u>                    </u>
Soil Testing:	\$ <u>                    </u>
Other:	\$ <u>                    </u>
3. Construction Cost	\$ <u>14,700,025</u>
4. Architectural/Engineering Fees:	\$ <u>394,828</u>
5. Utilities:	\$ <u>310,480</u>
6. Landscaping & Site Development:	\$ <u>inc. in #3</u>
7. Equipment:	\$ <u>1,465,000</u>
8. Contingencies:	\$ <u>1,362,655</u>
9. Other: <u>Water Storage</u>	\$ <u>517,750</u>
<u>Construction Mgmt</u>	\$ <u>610,007</u>
TOTAL COST	\$ <u>19,360,745</u>
Less other funds available	
Source <u>                    </u>	\$ <u>0</u>
<u>                    </u>	\$ <u>                    </u>
Long Range Building Fund	\$ <u>19,360,745*</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: July, 1994	
Number of Additional Personnel Required: Approx. 244	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( <u>94-95</u> )	
Personnel Services	\$ <u>12,544,094</u>
Operating Expenses	\$ <u>1,531,645</u>
Maintenance Expenses	\$ <u>2,000</u>
2. SECOND BIENNIUM ( <u>96-97</u> )	
Personnel Services	\$ <u>13,798,503</u>
Operating Expenses	\$ <u>1,684,809</u>
Maintenance Expenses	\$ <u>2,500</u>
3. THIRD BIENNIUM ( <u>98-99</u> )	
Personnel Services	\$ <u>15,454,323</u>
Operating Expenses	\$ <u>1,886,986</u>
Maintenance Expenses	\$ <u>3,000</u>

\* See General Narrative for total project cost.



GENERAL NARRATIVE MATERIAL

Population projections through FY 95 for male inmates at the Montana State Prison indicate that in addition to the alternatives to incarceration being considered in community programs, the need exists for 2 additional High/Close Security housing units. By 1995, there will be a need for over 330 High/Close and Medium Security beds. The proposed housing units would meet those needs with very few surplus beds by double bunking one of the 120 bed housing units.

This proposal to expand the existing maximum security compound to house Close Security and Maximum Security inmates is the only viable way to add additional housing on the MSP campus. The Department and the Legislature recognized that the existing compounds were built to accommodate no more than 1,150 inmates. The ACA Commission on Accreditation for Corrections recommends that either new construction, or renovation of existing facilities, limit individual compounds to no more than 500 inmates. This option essentially provides for three compounds, none of which will significantly exceed 500 inmates. The Low Security Compound has an emergency capacity of 562, Medium Security can house about 432 men and a new Close/Maximum Security compound would house over 436.

This project is deemed inappropriate for the Percent for Art program because of the high security, nature of the project and limited amount of 'public' space.

PROJECT SUMMARY

Work bid to a Private Contractor:

1. Construct 120 bed High Security Housing Unit similar to existing Close III unit, and designed to allow future double bunking.
2. Construct 96 bed Close Security Housing Unit similar to existing Maximum Security Unit.
3. Construct Multi-Purpose Building similar to existing High Security Unit.
4. Construct Dining/Kitchen Facility.
5. Construct Vocational Education Building.
6. Construct one additional Guard Tower.
7. Expand perimeter security fence and detection system.
8. Install underground utilities and increase water storage system.
9. Provide site development and roads, parking and lighting.

TOTAL

\$15,248,265

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

Work completed with inmate labor under trade supervision:

1. Construct Gymnasium.
2. Construct Vocational Education Building.
3. Construct Yard Storage Facility.
4. Expand Warehouse.
5. Expand Business Office.
6. Expand Low Security Food Service

TOTAL

\$1,642,645

**NOTE:** Inmate labor portion of project is contingent on passage of bill amending section 53-1-301, MCA, to allow the use of inmate labor to provide construction and renovation services without a maximum dollar amount limit. Otherwise, additional funds will be needed to complete this portion of the project by bidding to a private contractor.

TOTAL PROJECT FUNDING

Source	Amount
Cash Program (05007)	\$877,500
Priority #23	
Bonded Debt	<u>\$19,360,745</u>
TOTAL	<u>\$20,238,245</u>

Project Title Const. Engineering/Physical Science Complex  
Project Priority 58  
Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program Montana State University

A. THIS PROJECT: (Check one)

- ☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Montana State University, Bozeman

(Check where appropriate)

- ☐ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project request is based on the construction of 67,000 sq. ft. of new academic and research facilities and refurbishment of Roberts Hall, Cobleigh Hall, Ryon Lab, A.J.M Johnson Hall, and Gaines Hall to present day standards for engineering and related physical sciences (math, physics, and chemistry).

Impact on Existing Facilities:

The project will eliminate those facilities that are not economically fit to be remodeled, update those that are, and eliminate overcrowding of others. The project will relocate the computer center/services to provide for expansion space for the library.

Number to be served by Facility: Students & faculty

Functional Space Requirements: 181,679 inc remodel

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The facilities housing portions of engineering, physics, and computer science are both obsolete and overcrowded. Those housing chemistry and mathematics are overcrowded, hazardous, and lack adequate classroom laboratory space. Cobleigh Hall requires remedial structural modification. Research programs require fully functional facilities that will accommodate new and evolving technologies, whose requirements exceed the capability of current facilities.

E. ALTERNATIVES CONSIDERED:

During the preliminary design process a number of alternatives were considered including:

1. Remodel and add to Ryon Lab, expand the physics and chemistry buildings, and build new lecture halls, either as one project or separate.
2. Remodel and add to Ryon Lab only.
3. Replace Ryon Lab.
4. A combination of the above.

Rationale for Selection of a Particular Alternative:

The request is based on the Schematic Design and estimate produced by CTA Architects Engineers which addressed the needs of the Engineering/Physical Science Department. The program will be updated to reflect more current needs.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate:	CTA Architects Engineers
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ 17,328,960
4. Architectural/Engineering Fees:	\$ 536,250
5. Utilities:	\$ 1,750,000
6. Landscaping & Site Development:	\$ Inc. in #3
7. Equipment:	\$ 1,350,000
8. Contingencies:	\$ _____
9. Other: Art	\$ 104,500
	\$ _____
TOTAL COST	\$ 21,069,710
Less other funds available	
Source	\$ 3,335,250
	\$ _____
Long Range Building Fund	\$ 17,734,460

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date:	September 1, 1994
Number of Additional Personnel Required:	2 FTE
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM ( 94-95 )	
Personnel Services	\$ 44,000
Operating Expenses	\$ 175,000
Maintenance Expenses	\$ 21,000
2. SECOND BIENNIUM ( 96-97 )	
Personnel Services	\$ 93,600
Operating Expenses	\$ 439,200
Maintenance Expenses	\$ 46,000
3. THIRD BIENNIUM ( 98-99 )	
Personnel Services	\$ 98,300
Operating Expenses	\$ 461,200
Maintenance Expenses	\$ 48,300



GENERAL NARRATIVE MATERIAL

During the years since World War II knowledge in the Physical Science disciplines has expanded at a phenomenal rate. The catalyst for this expansion of knowledge has been, in a large part, the de-stratification of academic disciplines. Prior to that time, the Physical Sciences and Engineering were largely separate, with ongoing research done primarily within the separate disciplines.

During the present era, Physical Scientists and Engineers have been working more closely together to develop such new common entities such as lasers, computers, satellite communications, and other "high tech" operational equipment and ideas. This facility is dedicated to support such inter-disciplinary basic and applied research.

While it is possible to create undergraduate space in existing facilities by remodeling, new thrusts in research require unique facilities which cannot effectively be created through the remodeling process. As a major academic and research institution, Montana State University must fulfill its obligation to society by contributing its share of research knowledge which cannot economically be undertaken in any other segment of society. This investment will increase Montana State University's competitive position in high technology fields, and facilitate the economic development, growth, and viability of the State.

The basic industries of Montana presently have a limited job potential for graduates; however, the fields created through this type of basic and applied technical research hold great potential for MSU graduates. The opportunity for learning and contributing in these fields must not be withheld from these young people. To a large extent, traditional undergraduate courses must continue to be offered, but facilities must be remodeled to meet present day standards. Due to the special characteristics required, new classroom and laboratory space must be created which is specific to newer technological disciplines. The objectives of this project request are as follows:

1. Improve research/outreach facilities to provide highly technical human and physical resources for Montana industries and citizens;
2. Provide additional facilities to offer students adequate access to computer use;
3. Build additional and/or remodel existing class laboratory space to eliminate overcrowding and provide safer conditions in areas of specialized equipment;
4. Relocate and improve highly specialized laboratories such as those in the basement of A.J.M. Johnson Hall (Physics);
5. Provide new, specially designed space for the Department of Computer Science;
6. Provide additional classroom space which will support the use of state-of-the-art methodologies for teaching;
7. Combine all service areas such as the Machine Shop, Electrical Shop, etc., and provide for a more efficient and effective use of space and resources;
8. Provide opportunities for technology transfer and enhance the State's economic development efforts.

Specifically, the new structure would contain about 67,000 assignable square feet, which has been determined by careful analysis as the amount that is necessary. Of this, approximately 6,000 sq. ft. is for new classroom space. The existing complex of buildings including Roberts Hall, Cobleigh Hall, Ryon Lab, A.J.M. Johnson Hall (Physics) and Gaines Hall (Chemistry) would be subject to some remodeling which would range from very minor to quite major depending on the specific areas intended use.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

TOTAL PROJECT FUNDING:

SOURCE	AMOUNT
Cash Program (05007)	1,165,290*
Bonded Debt	17,734,460
Donated Cash	<u>3,335,250</u>
TOTAL PROJECT	22,235,000

\* Preliminary design has been requested in priority #28 of the Cash Program.

Project Title Construct Business Administration Building  
Project Priority 59  
Biennium 1992 - 1993

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program University of Montana

A. THIS PROJECT: (Check one)

- ☒ Is an Original Facility      ☐ Major Maintenance Class  
☐ Improves an Existing Facility      ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: University of Montana, Missoula

(Check where appropriate)

- ☒ Site on Owned Property      ☐ Outside of 100 Year Flood Plain  
☐ Site to be Selected      ☐ Utilities Already Available  
☒ Site Already Selected      ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project proposes to construct a new building to house the entire School of Business. The 104,600 sq. ft. building will include classrooms, faculty offices, computer laboratories, a lecture hall, a Small Business Institute case room. In addition, it will house the Bureau of Business and Economic Research, the Montana Entrepreneur Center.

Impact on Existing Facilities:

The construction of this building will help reduce overcrowding in several campus buildings by making current space occupied by the Business School available for other programs.

Number to be served by Facility: Students & faculty

Functional Space Requirements: 104,600

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

At the present time, School of Business faculty members are located in separate facilities. The construction of this building would allow the faculty to be located in one facility. Other university programs are housed in overcrowded and inadequate facilities including several houses on the edge of campus.

E. ALTERNATIVES CONSIDERED:

1. Continue in existing space.
2. Construct an addition to the existing building.
3. Construct a new building.

Rationale for Selection of a Particular Alternative:

The construction of a new building was selected because it will create a more efficient Business School and address severe overcrowding in other buildings. The request is based on updated program and Schematic Design developed in 1984.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: <u>Facilities Services</u>	
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ <u>11,573,000</u>
4. Architectural/Engineering Fees:	\$ <u>399,645</u>
5. Utilities:	\$ <u>267,500</u>
6. Landscaping & Site Development:	\$ <u>235,000</u>
7. Equipment:	\$ <u>1,697,000</u>
8. Contingencies:	\$ <u>578,000</u>
9. Other: <u>Art</u>	\$ <u>76,000</u>
<u>Legal &amp; Admin.</u>	\$ <u>55,150</u>
TOTAL COST	\$ <u>14,881,295</u>
Less other funds available	
Source <u>Donations 32101</u>	\$ <u>2,322,900</u>
	\$ _____
Long Range Building Fund	\$ <u>12,588,395*</u>

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: August, 1994

Number of Additional Personnel  
Required: 11.00 FTE

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( 94-95 )

Personnel Services

\$ 267,025

Operating Expenses

\$ 156,863

Maintenance Expenses

\$ 159,452

2. SECOND BIENNIUM ( 96-97 )

Personnel Services

\$ 566,521

Operating Expenses

\$ 332,800

Maintenance Expenses

\$ 253,429

3. THIRD BIENNIUM ( 98-99 )

Personnel Services

\$ 611,845

Operating Expenses

\$ 359,424

Maintenance Expenses

\$ 273,700

\* See General Narrative for total project cost.



GENERAL NARRATIVE MATERIAL

The Board of Regents Role and Scope Statement has designated the University of Montana as the institution with primary responsibility for graduate instruction in Business, and to offer a full Business undergraduate program with a full range of options. If the University is to carry out this mission, it needs modern facilities with adequate space for students, faculty, and staff.

The present Business Administration building was constructed in 1950 and is now inadequate for this rapidly growing program. About one-half of the faculty have offices separated from the rest of the School of Business. With the distance between offices, it is difficult to develop the Business School as a cohesive unit. The present building provides inadequate classroom space. There is an immediate need for at least a 25% increase in classroom space. The space occupied by the Bureau of Business and Economic Research is also inadequate. There is no space for interactive television classes or the Montana Entrepreneurship Center.

With the construction of the new Business Administration Building, the old facility with 15,830 assignable square feet of space will be used to help alleviate the shortage of classroom and office space. This will allow the University to find adequate space for the faculty, staff and teaching assistants housed in cramped quarters and find permanent offices for the people currently temporarily housed in unused dormitory space.

The new facility will have two classrooms designed and equipped to originate live telecourses for existing MBA and Continuing Education courses. This educational delivery system has been working very effectively in the Billings MBA program and Pharmacy Continuing Educational courses and will enhance the accessibility component of the University's mission while avoiding duplication.

The construction of this building will help solve two problems: 1) inadequate space for the School of Business; and 2) relocating faculty from temporary into permanent office space.

TOTAL PROJECT FUNDING:

SOURCE	AMOUNT
Cash Program (05007)	604,705*
Bonded Debt	12,558,395
Cash Donations	<u>2,322,900</u>
TOTAL PROJECT	15,486,000

\* Preliminary design has been requested in priority #2B of the Cash Program.

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Project Title Construct Gymnasium  
Project Priority 60  
Biennium 1992 - 1993

Department BOARD OF REGENTS  
Agency/Program Northern Montana College

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☐ Improves an Existing Facility ☒ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Northern Montana College, Havre

(Check where appropriate)

☒ Site on Owned Property ☐ Outside of 100 Year Flood Plain  
☒ Site to be Selected ☐ Utilities Already Available  
☐ Site Already Selected ☐ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

This project will construct a gymnasium to house the instructional, recreational and athletics programs of NMC. It will provide approximately 40,000 square feet with adequate seating capacity to host state and divisional basketball tournaments.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The present gymnasium lacks adequate instructional teaching areas, locker space, seating, and recreational activity areas. Recent surveys of the building reveal significant structural deficiencies and code violations. The pool has been closed for safety considerations and the main gym temporarily closed until remedial repairs were accomplished.

E. ALTERNATIVES CONSIDERED:

1. Modify and expand present facility.
2. Continue use of present building.
3. Construct a new facility to meet the needs of the school and community.
4. Abandon building and operate without a Physical Education building.

Impact on Existing Facilities:

This project will replace a building constructed in 1957.

Rationale for Selection of a Particular Alternative:

Alternative #3 was selected as structural erosion and inherent design deficiencies are of the magnitude where continued use of the building, or repairs and improvements are not feasible. Northern's prime curriculum is teaching, and PE is an important element in providing students abilities to meet the demands of local school districts.

Number to be served by Facility: Students, faculty/visitor

Functional Space Requirements: 40,000

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate: Northern Montana College

1. Land Acquisition: \$ \_\_\_\_\_

2. Preliminary Expenses: \$ \_\_\_\_\_

Site Survey: \$ 3,000

Soil Testing: \$ 5,000

Other: \$ \_\_\_\_\_

3. Construction Cost \$ 6,357,400

4. Architectural/Engineering Fees: \$ 476,900

5. Utilities: \$ 52,000

6. Landscaping & Site Development: \$ Inc. in #3

7. Equipment: \$ 400,000

8. Contingencies: \$ 635,700

9. Other: Artwork \$ 70,000

\$ \_\_\_\_\_

TOTAL COST \$ 8,000,000

Less other funds available  
Source Unknown \$ 8,000,000

\$ \_\_\_\_\_

Long Range Building Fund \$ 0

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: September, 1995

Number of Additional Personnel  
Required: 1.0 FTE

Additional Funds Required when  
Project is in Full Operation:

1. FIRST BIENNIUM ( 94-94 )

Personnel Services

\$ 15,000

Operating Expenses

\$ 5,000

Maintenance Expenses

\$ 7,000

2. SECOND BIENNIUM ( 96-97 )

Personnel Services

\$ 30,000

Operating Expenses

\$ 10,000

Maintenance Expenses

\$ 14,000

3. THIRD BIENNIUM ( 98-99 )

Personnel Services

\$ 30,000

Operating Expenses

\$ 10,000

Maintenance Expenses

\$ 14,000

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

This project will construct a new gymnasium for Northern Montana College. The present gym, constructed in 1957, is becoming functionally inadequate and obsolete. The present facility lacks instructional areas for certain physical education classes. The locker rooms are inadequate. Repairs to the present structure are requiring more and more of the maintenance budget of the college. There is insufficient seating capacity for the events sponsored by the students of NMC.



LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

Department MONTANA UNIVERSITY SYSTEM  
Agency/Program Eastern Montana College

Project Title Renovate Apsaruke Hall  
Project Priority 61  
Biennium 1992 - 1993

A. THIS PROJECT: (Check one)

☐ Is an Original Facility ☐ Major Maintenance Class  
☒ Improves an Existing Facility ☐ Replaces Existing Facility  
☐ Other \_\_\_\_\_

B. LOCATION: Eastern Montana College, Billings

(Check where appropriate)

☒ Site on Owned Property ☒ Outside of 100 Year Flood Plain  
☐ Site to be Selected ☒ Utilities Already Available  
☒ Site Already Selected ☒ Access Already Available

C. DESCRIPTION OF FACILITY:

General Description:

The project will renovate an existing 20,253 sq. ft. 3-story brick building originally built for use as a residence hall; conversion will better meet the academic needs of the campus.

Impact on Existing Facilities:

The project will relieve overcrowding in existing academic and administrative areas of the campus. Dormitory space will be lost in the conversion to academic space.

Number to be served by Facility: 5,000

Functional Space Requirements: 20,253 sq. ft.

D. EXPLANATION OF THE PROBLEM BEING ADDRESSED:

The project will relieve the pressure on existing space and put a well built empty building into use.

E. ALTERNATIVES CONSIDERED:

1. Let the building sit as it is and absorb the expense of maintaining an empty building.
2. Remodel the building to alleviate overcrowding.

Rationale for Selection of a Particular Alternative:

Alternative #2 addresses the need for adequate academic and administrative space, while at the same time relieves "auxiliary services" of a financial burden, in maintaining an empty building..

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

F. ESTIMATED COST OF PROJECT

Source of Estimate:	EMC Physical Plant
1. Land Acquisition:	\$ _____
2. Preliminary Expenses:	\$ _____
Site Survey:	\$ _____
Soil Testing:	\$ _____
Other:	\$ _____
3. Construction Cost	\$ 766,830
4. Architectural/Engineering Fees:	\$ 32,500
5. Utilities:	\$ _____
6. Landscaping & Site Development:	\$ _____
7. Equipment:	\$ 120,000
8. Contingencies:	\$ 96,680
9. Other: _____ Art	\$ 12,350
_____	\$ _____
TOTAL COST	\$ 1,228,360
Less other funds available	_____
Source _____	\$ 0
_____	\$ _____
Long Range Building Fund	\$ 1,228,360

G. ESTIMATED OPERATIONAL COST AT COMPLETION:

Completion Date: July, 1993	
Number of Additional Personnel Required: 1.0 FTE	
Additional Funds Required when Project is in Full Operation:	
1. FIRST BIENNIUM (    92-93    )	
Personnel Services	\$    21,000
Operating Expenses	\$    27,000
Maintenance Expenses	\$    26,000
2. SECOND BIENNIUM (   94-95    )	
Personnel Services	\$    22,000
Operating Expenses	\$    28,000
Maintenance Expenses	\$    27,000
3. THIRD BIENNIUM (    96-97    )	
Personnel Services	\$    23,000
Operating Expenses	\$    29,000
Maintenance Expenses	\$    28,000

LONG RANGE BUILDING PROGRAM  
CAPITAL PROJECT REQUEST

GENERAL NARRATIVE MATERIAL

TOTAL PROJECT FUNDING:

SOURCE

Cash Program (05007)  
Bonded Debt

TOTAL PROJECT

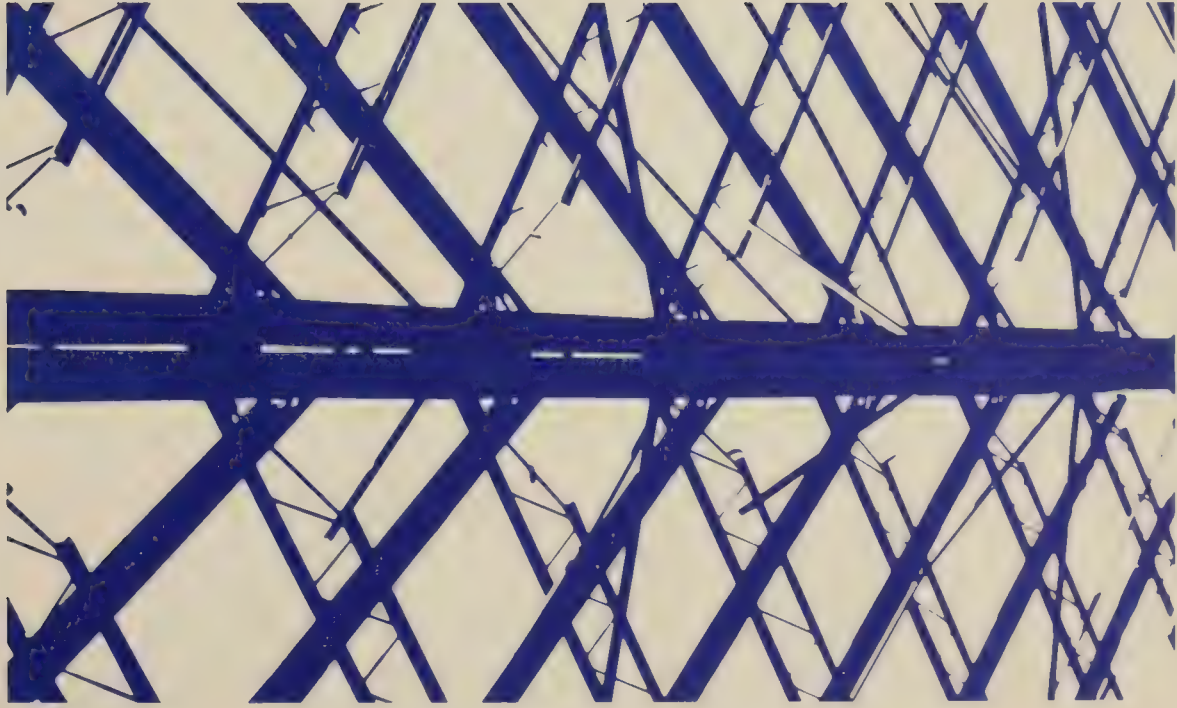
AMOUNT

71,640  
1,228,360

1,300,000







# Building Program Requests



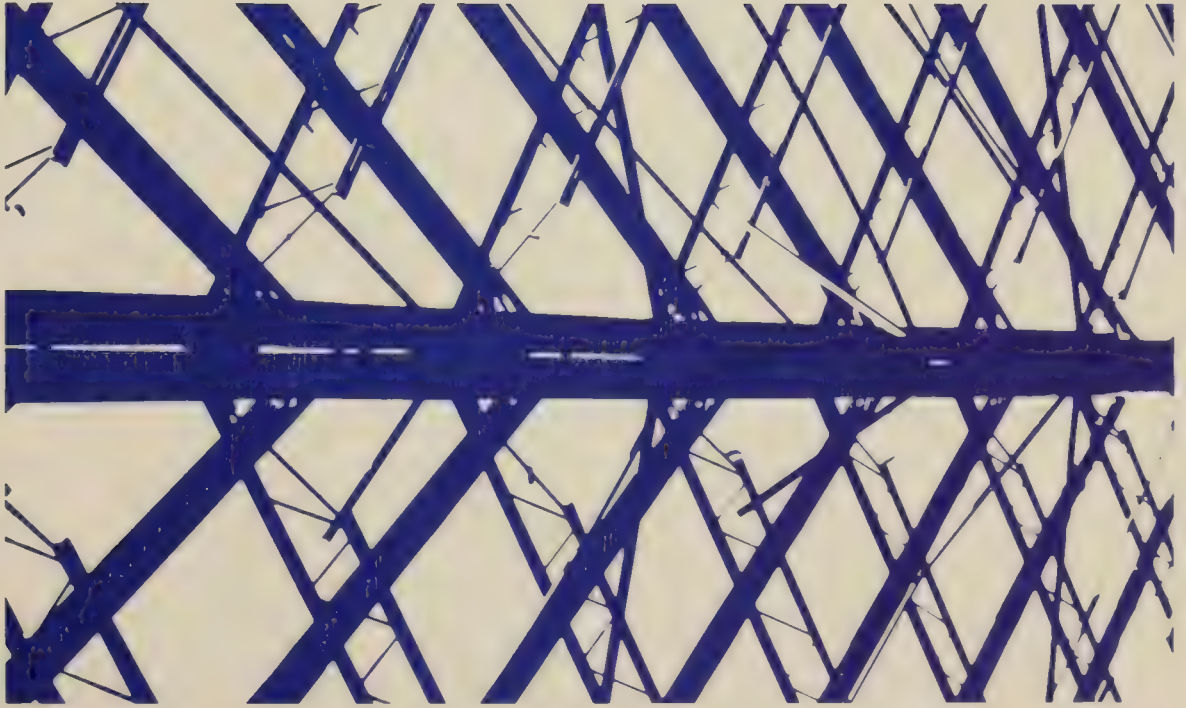
SUMMARY OF REQUESTS  
BY AGENCY  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
SUMMARY OF PROJECT REQUESTS						
	Department of Administration	\$24,036,550	\$0	\$0	\$0	\$24,036,550
	Department of Commerce	\$0	\$0	\$465,957	\$51,773	\$517,730
	Department of Education	\$2,923,546	\$0	\$0	\$0	\$2,923,546
	Department of Family Services	\$5,116,638	\$0	\$0	\$0	\$5,116,638
	Department of Fish, Wildlife & Parks	\$0	\$11,601,356	\$2,296,000	\$0	\$13,897,356
	Department of Highways	\$0	\$1,727,025	\$0	\$0	\$1,727,025
	Department of Institutions	\$59,602,543	\$0	\$0	\$368,976	\$59,971,519
	Department of Justice	\$17,558,119	\$0	\$0	\$0	\$17,558,119
	Department of Labor and Industry	\$0	\$0	\$310,000	\$0	\$310,000
	Department of State Lands	\$972,120	\$226,900	\$429,500	\$0	\$1,628,520
	Department of Military Affairs	\$3,482,600	\$0	\$22,378,500	\$0	\$25,861,100
	Office of Public Instruction	\$2,017,500	\$0	\$0	\$4,000,000	\$6,017,500
	Montana University System	\$126,206,212	\$0	\$12,000,000	\$20,929,600	\$159,135,812





# Departments and Agencies





# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF ADMINISTRATION						
1.	FIRE PROTECTION, CAPITOL COMPLEX Install a central fire alarm system to connect Capitol Complex buildings to main fire alarm panel to protect property and human lives.	\$50,000				\$50,000
2.	WATER CONSERVATION AND IRRIGATION Develop wells within the Capitol Complex to reduce the dependency on City of Helena water supply and to reduce costs.	\$50,000				\$50,000
3.	REPLACE ROOFS, CAPITOL COMPLEX Apply new roofs as needed to prevent leakage and to avoid future water damage to structures and contents.	\$132,081				\$132,081
4.	LIMESTONE REPAIR, VETS PIONEER MEMORIAL BUILDING Repair limestone panels on the 1970 building addition to prevent further deterioration.	\$205,000				\$205,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
5.	COGSWELL BUILDING STANDBY GENERATOR Install generator to operate vaccine refrigeration units during periods of power failures.	\$150,000				\$150,000
6.	WINDOW REPLACEMENT, CAPITOL COMPLEX Replace existing windows throughout the Capitol Complex to restore architectural integrity and increase energy efficiency.	\$1,091,743				\$1,091,743
7.	ASBESTOS ABATEMENT, PHASE III, STATEWIDE Remove and/or encapsulate asbestos containing materials located in buildings throughout the state.	\$213,000				\$213,000
8.	PARKING LOT REPAIR, CAPITOL COMPLEX Repair and seal asphalt paving, parking lots and driveways to prevent further deterioration.	\$103,014				\$103,014
9.	HANDICAPPED MODIFICATIONS Provide modifications to buildings in the Capitol Complex to eliminate architectural barriers and improve handicapped accessibility.	\$500,000				\$500,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
10.	CARPET REPLACEMENT, CAPITOL COMPLEX Replace deteriorated carpet to prevent accidents and improve the work environment.	\$100,000				\$100,000
11.	MITCHELL BUILDING RENOVATION/AIR CONDITIONING Remodel existing office building to provide for more efficient use of the space. Install an air conditioning system to increase air circulation and reduce seasonal high interior temperatures.	\$1,626,672				\$1,626,672
12.	STATE LIBRARY COMPACT SHELIVING Install compact shelving units to provide necessary storage.	\$200,000				\$200,000
13.	CAPITOL FIRST FLOOR RENOVATION Renovate Capitol building to provide for more efficient use of the space and to restore the historic stature.	\$5,000,000				\$5,000,000
14.	NEW BUILDING FACILITY, INFORMATION SERVICES DIVISION Construct a secure climate-controlled building to house the state's central (host) computer facility and communication network.	\$3,800,000				\$3,800,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
15.	NEW OFFICE BUILDING, DEPARTMENT OF COMMERCE Construction of new office facility for the Department of Commerce to create a more efficient working environment.	\$7,455,000				\$7,455,000
16.	NEW MAINTENANCE FACILITY, CAPITOL COMPLEX Construct a new Maintenance Shop Building to consolidate the General Services Division.	\$1,705,219				\$1,705,219
17.	LAND ACQUISITION, CAPITOL COMPLEX AREA Acquire property to provide land for new buildings and parking facilities.	\$1,154,821				\$1,154,821
18.	CAPITOL DOME REPAIR Repair/replace the Capitol dome to provide bright copper finish.	\$500,000				\$500,000
DEPARTMENT OF ADMINISTRATION						
SUBTOTAL		\$24,036,550	\$0	\$0	\$0	\$24,036,550

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF COMMERCE						
1.	REPAVING AND MISCELLANEOUS IMPROVEMENTS, WEST YELLOWSTONE AIRPORT Repave asphalt areas to prevent further deterioration and install Federally required signs.			\$465,957	\$51,773	\$517,730
DEPARTMENT OF COMMERCE						
SUBTOTAL						
				\$465,957	\$51,773	\$517,730
DEPARTMENT OF EDUCATION						
MONTANA HISTORICAL SOCIETY						
1.	OFF-SITE STORAGE BUILDING Construct a storage facility, removed from the Capitol Complex, to provide storage for large artifacts and records.	\$900,000				\$900,000
2.	FIRE ESCAPE, ORIGINAL GOVERNOR'S MANSION Construct a second emergency exit from the third floor of the Mansion to increase public safety.	\$40,000				\$40,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	FIRE SUPPRESSION SYSTEM MODIFICATION, VETS PIONEERS MEMORIAL BUILDING Install zone inspection/drain valves, a backup power supply and pressure gauges to eliminate existing system deficiencies.	\$6,606				\$6,606
4.	AIR FILTRATION SYSTEM MODIFICATION, VETS PIONEERS BUILDING Modify air filtration system to improve removal of particulate matter and improve protection of collections.	\$4,500				\$4,500
5.	PAINT LIBRARY AND STACKS, VETS PIONEERS BUILDING Paint library and stacks to improve aesthetic quality of the building.	\$6,250				\$6,250
6.	CLIMATE CONTROL PHASE I, ORIGINAL GOVERNORS MANSION Install climate control system to better protect the building and contents.	\$16,000				\$16,000
7.	ARCHIVE SHELF INSTALLATION, VETS PIONEERS BUILDING Install custom shelving in the first stack level to accommodate archive collections.	\$19,200				\$19,200



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
8.	NITRATE VAULT ALARM MODIFICATION, VETS PIONEER BUILDING Integrate nitrate vault temperature sensor alarm with fire alarm system to provide adequate protection during hours when the building is unoccupied.	\$5,500				\$5,500
9.	PAVE REAR ACCESS, VETS PIONEER BUILDING Pave drive to exhibit doors from parking lot to provide better delivery access.	\$9,000				\$9,000
10.	CARPET REPLACEMENT, MAIN FLOOR OFFICES EAST, VETS PIONEER BUILDING Replace worn carpet to improve acoustic value while aesthetically enhancing the interior of the building.	\$3,500				\$3,500
MONTANA HISTORICAL SOCIETY						
SUBTOTAL		\$1,010,556	\$0	\$0	\$0	\$1,010,556

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

## FUNDING SOURCE

Priority	Agency/Project	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	TOTAL
MONTANA SCHOOL FOR THE DEAF AND BLIND						
1.	BUILDING ADDITION AND MODIFICATION, \$922,000 ACADEMIC BUILDING AND ASPEN HALL Construct an addition to the Academic Building to accommodate multiple handicapped students. Remodel Aspen Hall to provide additional storage, vehicle shop and delivery areas.					\$922,000
2.	ROOF REPLACEMENT, ACADEMIC BUILDING Replace roof to prevent additional leakage and further damage to the structure and contents.	\$310,000				\$310,000
3.	CARPET REPLACEMENT, ACADEMIC BUILDING Replace worn carpet to improve acoustic value for hearing impaired children while aesthetically enhancing the interior of the building.	\$147,000				\$147,000
4.	GUTTER INSTALLATION AND EXTERIOR BRICK SEALANT APPLICATION, GYMNASIUM Install rain gutters and apply water sealant to existing brick exterior to prevent further water damage.	\$9,000				\$9,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
5.	GUTTER INSTALLATION AND FASCIA/ GABLE PAINTING, CAMPUSWIDE COTTAGES Install rain gutters and paint existing wood fascias and gables prevent further water damage.	\$20,000				\$20,000
6.	SETTLING DAMAGE REPAIR, COTTAGE I Repair sheetrock cracks on the walls and ceilings and damage to doors caused by building settlement.	\$6,390				\$6,390
7.	RENOVATE ACADEMIC BUILDING Renovate Academic Building to provide secure file storage area and allow for efficient use of space.	\$20,000				\$20,000
8.	AIR CONDITIONING INSTALLATION, COTTAGE II Install an air conditioning system to reduce seasonal high interior temperatures.	\$34,000				\$34,000
9.	CONSTRUCT MAINTENANCE/STORAGE BUILDING Construct a maintenance/storage building to provide a facility for vehicle maintenance and storage. (NOTE: This project would not be needed if priority #1 is funded.)	\$176,000				\$176,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
10.	REPAVE MAIN PARKING LOT Repair and repave asphalt parking lots to prevent further deterioration.	\$15,000				\$15,000
11.	PAVE GRAVEL PARKING LOT, ASPEN HALL Pave gravel parking lot to provide easier access for handicapped students. (NOTE: This project would not be needed if priority #1 is funded.)	\$15,000				\$15,000
12.	UNDERGROUND SPRINKLER SYSTEM Install underground sprinkler system to improve efficiency of maintenance personnel and conserve water.	\$48,000				\$48,000
13.	CONSTRUCT INFIRMARY FACILITY Construct infirmary facility to allow for isolation and segregation of children with contagious infections.	\$190,600				\$190,600
MONTANA SCHOOL FOR THE DEAF AND BLIND - SUBTOTAL		\$1,912,990	\$0	\$0	\$0	\$1,912,990



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF EDUCATION						
SUBTOTAL		\$2,923,546	\$0	\$0	\$0	\$2,923,546
DEPARTMENT OF FAMILY SERVICES						
1.	NEW COTTAGE, MOUNTAIN VIEW SCHOOL Replace an outdated cottage with a new duplex cottage to improve program and safety features of the school.	\$1,200,000				\$1,200,000
2.	NEW LODGE, PINE HILLS SCHOOL Replace an outdated cottage with a new medium/high security living unit to improve health and safety conditions of the school.	\$962,000				\$962,000
3.	CONSTRUCT WAREHOUSE Construct warehouse to provide adequate storage and freezer space, thus eliminating the need to rent storage space.	\$350,000				\$350,000
4.	AIR COMPRESSOR REPLACEMENT Replace obsolete air compressor to reduce maintenance costs and to improve air/temperature control.	\$11,500				\$11,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
5.	SECURITY FENCE CONSTRUCTION Construct fence to improve security.	\$5,050				\$5,050
6.	REPLACE ROOF, SUNDANCE LODGE, PINE HILLS SCHOOL Replace roof to prevent leakage and further interior damage to the structure and contents.	\$30,888				\$30,888
7.	REPLACE ROOF, COTTONWOOD LODGE, MOUNTAIN VIEW SCHOOL Replace roof to prevent leakage and further interior damage to the structure and contents.	\$57,200				\$57,200
8.	GYMNASIUM/SCHOOL CONSTRUCTION, MOUNTAIN VIEW SCHOOL Construct new gym and school building to replace existing inadequate facility.	\$2,500,000				\$2,500,000
DEPARTMENT OF FAMILY SERVICES						
SUBTOTAL		\$5,116,638	\$0	\$0	\$0	\$5,116,638

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF FISH, WILDLIFE AND PARKS						
1.	UNDERGROUND STORAGE TANK REMOVAL AND INSPECTION, STATEWIDE Remove, inspect and test underground storage tanks statewide to comply with state and federal laws.		\$150,000			\$150,000
2.	HEADQUARTERS MAINTENANCE AND HANDICAPPED IMPROVEMENTS, STATEWIDE Maintain and improve facilities to prevent deterioration and increase handicapped accessibility.		\$85,000			\$85,000
3.	DEPARTMENT PROPERTY DEVELOPMENT Maintain and develop sites statewide to protect from deterioration and to better serve the public.		\$360,000			\$360,000
4.	STATE PARK MAINTENANCE AND DEVELOPMENT, STATEWIDE Maintain and develop sites statewide to protect from deterioration and to better serve the public.		\$3,798,500	\$1,124,500		\$4,923,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
5.	FISH HATCHERY MAINTENANCE, STATEWIDE Maintain fish hatcheries statewide to improve facilities and prevent deterioration.		\$37,500	\$112,500	\$150,000	
6.	FISHING ACCESS SITE IMPROVEMENTS, STATEWIDE Improve fishing access sites to protect property investment and the environment of the sites.		\$286,000	\$858,000		\$1,144,000
7.	D.J. BOAT FACILITIES, STATEWIDE Provide boat access and facilities statewide to better serve the public.		\$67,000	\$201,000		\$268,000
8.	RIVER RESTORATION, STATEWIDE Improve rivers statewide to provide enhanced fish habitat.		\$261,000			\$261,000
9.	FISHING ACCESS SITE ACQUISITION, STATEWIDE Acquire property to provide sites statewide for fishing access and recreation.		\$881,000			\$881,000
10.	WILDLIFE HABITAT MAINTENANCE, STATEWIDE Maintain wildlife habitat sites to protect property investment and the environment of the sites.		\$304,000			\$304,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
11.	WILDLIFE HABITAT ACQUISITION, STATEWIDE Acquire land to reduce land use conflicts and maintain wildlife populations.		\$4,923,356			\$4,923,356
12.	WATERFOWL HABITAT ENHANCEMENT, STATEWIDE Construct additional waterfowl habitats and provide improvements to existing habitats to help increase Montana waterfowl production.		\$399,500			\$399,500
13.	BIGHORN SHEEP HABITAT ACQUISITION, STATEWIDE Acquire additional habitat for Bighorn sheep to provide for future expansion of sheep populations.		\$48,500			\$48,500
DEPARTMENT OF FISH, WILDLIFE AND PARKS						
SUBTOTAL		\$0	\$11,601,356	\$2,296,000	\$0	\$13,897,356

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF HIGHWAYS - MAINTENANCE AND EQUIPMENT DIVISION						
1.	MAINTENANCE PROJECTS, STATEWIDE Provide improvements and repairs to existing facilities statewide.		\$443,500			\$443,500
2.	HIGHWAY MAINTENANCE FACILITY #2, BILLINGS Construct a new Highway Maintenance Facility to reduce crew response time and to improve service.		\$140,000			\$140,000
3.	MAINTENANCE SECTION HEADQUARTERS COMPLEX, WHITEFISH Construct a new Section Headquarters to improve service and to reduce response time.		\$165,000			\$165,000
4.	HIGHWAY MAINTENANCE FACILITY, HELENA Relocate existing buildings and construct additional facilities to consolidate Maintenance Headquarters at Highway Department Headquarters.		\$410,000			\$410,000
5.	EQUIPMENT STORAGE BUILDING, GREAT FALLS, EAST SIDE Construct a new Equipment Storage Building to reduce crew response time and to improve service.		\$187,600			\$187,600

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
6.	EQUIPMENT STORAGE BUILDING, RAINY LAKE Construct a new three stall Equipment Storage Building to provide adequate storage for snow removal equipment,		\$100,000			\$100,000
7.	EQUIPMENT STORAGE BUILDING, PLENTYWOOD Construct a new three stall Equipment Storage Building to replace existing deteriorated facility and to provide adequate storage for equipment.		\$108,500			\$108,500
8.	EQUIPMENT STORAGE BUILDING, LOST TRAIL PASS Construct a new three stall Equipment Storage Building to replace existing deteriorated facility and to provide adequate storage for equipment.		\$115,925			\$115,925

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
9.	EQUIPMENT STORAGE BUILDING, LINCOLN Construct a three stall Equipment Storage Building to provide adequate storage for equipment.		\$56,500			\$56,500
DEPARTMENT OF HIGHWAYS						
SUBTOTAL		\$0	\$1,727,025	\$0	\$0	\$1,727,025
DEPARTMENT OF JUSTICE						
1.	OFFICE BUILDING, HELENA Construct new office building to accommodate entire Department of Justice to increase efficiency.	\$9,105,955				\$9,105,955
2.	ACADEMY/CRIME LAB Construct new facility to accommodate the Law Enforcement Academy and the State Crime Lab.	\$8,452,164				\$8,452,164
DEPARTMENT OF JUSTICE						
SUBTOTAL		\$17,558,119	\$0	\$0	\$0	\$17,558,119



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF LABOR AND INDUSTRY						
1.	ADDITION AND RENOVATIONS, GREAT FALLS JOB SERVICE Construct addition to house programs and renovate existing structure to eliminate structural problems.			\$310,000		\$310,000
DEPARTMENT OF LABOR AND INDUSTRY SUBTOTAL						
		\$0	\$0	\$310,000	\$0	\$310,000
DEPARTMENT OF STATE LANDS						
1.	MAINTENANCE PROJECTS, STATEWIDE Perform statewide maintenance projects, including roof repairs, to prevent further deterioration of structures and contents.	\$118,280				\$118,280
2.	UNDERGROUND STORAGE TANK REMOVAL, STATEWIDE Remove existing underground storage tanks to comply with Federal and State regulations.	\$62,000				\$62,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
3.	FOREST MANAGEMENT BUILDING ADDITION, MISSOULA Construct an addition to the Forest Management Building to provide adequate office and storage space.	\$87,300			\$87,300
4.	UNIT OFFICE/FIRE DISPATCH CENTER, PLAINS UNIT Construct new office/dispatch facility to replace existing deteriorated mobile home.	\$129,000			\$129,000
5.	HANDICAPPED ACCESS, KALISPELL Remodel existing office to provide handicapped access to reception area.	\$50,000			\$50,000
6.	SEED ORCHARD GREENHOUSE, MISSOULA Construct new greenhouse to provide regulated climate for Larch seed production.		\$84,100		\$84,100
7.	AIRCRAFT HANGER, HELENA Construct new hanger to provide security for and maintenance of Department of State Lands aircraft.			\$407,500	\$407,500
8.	FIRE FIGHTER DORMITORY, HELENA Construct dormitory to increase efficiency of fire fighting operations.			\$10,500	\$10,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
9.	FIRE EQUIPMENT STORAGE WAREHOUSE, \$136,500 MISSOULA Construct fire equipment storage building to provide adequate space for maintaining and storing equipment.				\$136,500
10.	STORAGE BUILDING, HELENA Construct fire equipment storage building to provide adequate cold storage for equipment and supplies.			\$3,000	\$3,000
11.	FIRE EQUIPMENT STORAGE WAREHOUSE, \$68,000 HELENA Construct fire equipment storage building to provide adequate space for maintaining and storing equipment.				\$68,000
12.	NURSERY GREENHOUSE, MISSOULA Construct additional greenhouse to produce sufficient seedlings to meet reforestation and conservation needs.		\$107,800		\$107,800
13.	FIRE EQUIPMENT STORAGE WAREHOUSE, LEWISTOWN Construct fire equipment storage building to provide adequate space for storing equipment.	\$29,000			\$29,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
14.	STORAGE WAREHOUSE, KALISPELL Construct storage building to provide adequate space for storing equipment.	\$18,540				\$18,540
15.	FIRE EQUIPMENT STORAGE WAREHOUSE, MARION Construct fire equipment storage building to provide adequate space for storing equipment.	\$25,000				\$25,000
16.	RADIO BUILDING, HELENA Construct a new building to provide facilities for the repair and storage of two-way fire radios.			\$8,500		\$8,500
17.	FIRE FIGHTER DORMITORY AND TRAINING CENTER, ANACONDA Construct dormitory and training center to increase efficiency of fire fighting operations.	\$35,000				\$35,000
18.	RESIDENCE, ANACONDA Construct Field Supervisor residence with Anaconda Job Corps volunteer labor to replace existing unsound structure.	\$30,000				\$30,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
19.	NURSERY STORAGE BUILDING, MISSOULA Construct nursery storage building to replace inadequate and unsound existing structure.	\$35,000	\$35,000			\$70,000
20.	NURSERY OFFICE ADDITION, MISSOULA Construct addition to existing office building to provide adequate office space.	\$20,000				\$20,000
21.	PAVING PROJECTS, STATEWIDE Pave existing gravel drives and parking lots to reduce dust and maintenance problems.	\$128,500				\$128,500
DEPARTMENT OF STATE LANDS SUBTOTAL		\$972,120	\$226,900	\$429,500	\$0	\$1,628,520
DEPARTMENT OF MILITARY AFFAIRS						
1.	NEW ARMORY BUILDING, LIBBY Construct a new building to provide adequate space for armory functions, thus eliminating the need to rent space.	\$495,600		\$704,000		\$1,199,600

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
2.	UNDERGROUND STORAGE TANK REMOVAL, STATEWIDE Remove existing unused underground storage tanks to comply with Federal and State regulations.	\$85,000			\$85,000
3.	RIFLE RANGE LEAD REMOVAL, STATEWIDE Remove lead contaminated materials from rifle ranges to allow use of ranges for other purposes until rehabilitation projects are funded by Fed. Government.	\$75,000			\$75,000
4.	ASBESTOS ABATEMENT, STATEWIDE Remove or encapsulate existing asbestos to bring facilities into compliance with current safety and health regulations.	\$93,000			\$93,000
5.	REPLACE FLOOR, CHINOOK SHOP Replace existing sloping floor to correct serious safety hazard and extend the life of the facility.	\$54,000			\$54,000
6.	BOILER/FURNACE REPLACEMENT, STATEWIDE Replace existing inadequate and dangerous boilers and furnaces statewide to improve efficiency and safety.	\$35,000			\$35,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNium

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
7.	ROOF REPAIRS AND REPLACEMENTS, STATEWIDE Repair and/or replace roofs to prevent leakage and to avoid future water damage to structures and their contents.	\$70,000				\$70,000
8.	REPAIR SIDEWALKS, ACCESS ROADS AND PARKING PAVING, STATEWIDE Repair sidewalks, access roads and parking paving to correct safety hazards and improve facility appearance.	\$55,000				\$55,000
9.	PAINT FACILITIES, STATEWIDE Paint facilities to prevent deterioration of the buildings.	\$92,000				\$92,000
10.	KITCHEN UPGRADE, STATEWIDE Upgrade existing, unusable kitchens to bring into compliance with codes.	\$89,500				\$89,500
11.	NEW ARMORY BUILDING, BILLINGS Construct a new building to provide adequate space for armory functions, thus eliminating the need to lease space.	\$1,300,000		\$3,500,000		\$4,800,000
12.	PAVE PARKING AREA, HELENA Pave existing gravel parking lot to reduce maintenance costs and improve handicapped accessibility.	\$93,000				\$93,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
13.	MILITARY VEHICLE COMPOUND EXPANSION, STATEWIDE Expand existing vehicle compounds to provide sufficient storage.	\$5,000		\$275,000	\$280,000
14.	ENERGY CONSERVATION RETROFIT, STATEWIDE Retrofit existing buildings to reduce energy consumption.	\$250,000			\$250,000
15.	LAND ACQUISITION, LIVINGSTON Acquire land adjacent to Livingston Armory to provide sufficient area for National Guard Unit training programs.	\$35,000			\$35,000
16.	RIFLE RANGE REHABILITATION, STATEWIDE Rehabilitate existing rifle ranges to comply with current military health and safety requirements.	\$5,000		\$555,000	\$560,000
17.	FEDERAL SPENDING AUTHORITY Provide Department of Military Affairs with authority to utilize Federal Funds.			\$300,000	\$300,000
18.	NEW ARMORY BUILDING, TRIANGLE AREA Construct a new armory building to provide adequate space for the armories functions.	\$500,500		\$889,500	\$1,390,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
19.	ARMORY ADDITION/ALTERATION, DILLON Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$918,000		\$923,000
20.	ARMORY ADDITION/ALTERATION, MILES CITY Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$1,076,000		\$1,086,000
21.	ARMORY ADDITION/ALTERATION, GLENDDIVE Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$691,000		\$696,000
22.	ARMORY ADDITION/ALTERATION, DEERLODGE Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$791,000		\$796,000
23.	ARMORY ADDITION/ALTERATION, MALTA Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$1,023,000		\$1,033,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
24.	ARMORY ADDITION/ALTERATION, HAMILTON Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$998,000		\$1,008,000
25.	ARMORY ADDITION/ALTERATION, WHITEFISH Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$698,000		\$703,000
26.	ARMORY ADDITION/ALTERATION, MISSOULA Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$1,510,000		\$1,520,000
27.	ARMORY ADDITION/ALTERATION, LEWISTOWN Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$671,000		\$676,000
28.	ARMORY ADDITION/ALTERATION, SIDNEY Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$742,000		\$752,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
29.	ARMORY ADDITION/ALTERATION, PLENTYWOOD Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$752,000		\$762,000
30.	ARMORY ADDITION/ALTERATION, CHINOOK Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$748,000		\$758,000
31.	ARMORY ADDITION/ALTERATION, GLASGOW Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$759,000		\$769,000
32.	ARMORY ADDITION/ALTERATION, ANACONDA Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$741,000		\$751,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
33.	ARMORY ADDITION/ALTERATION, HARLOWTON Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$536,000		\$541,000
34.	ARMORY ADDITION/ALTERATION, CULBERTSON Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$322,000		\$327,000
35.	ARMORY ADDITION/ALTERATION, BUTTE Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$1,024,000		\$1,034,000
36.	ARMORY ADDITION/ALTERATION, HAVRE Expand and alter existing armory building to provide adequate space for the armories functions.	\$10,000		\$1,380,000		\$1,390,000



# BUILDING PROGRAM REQUESTS

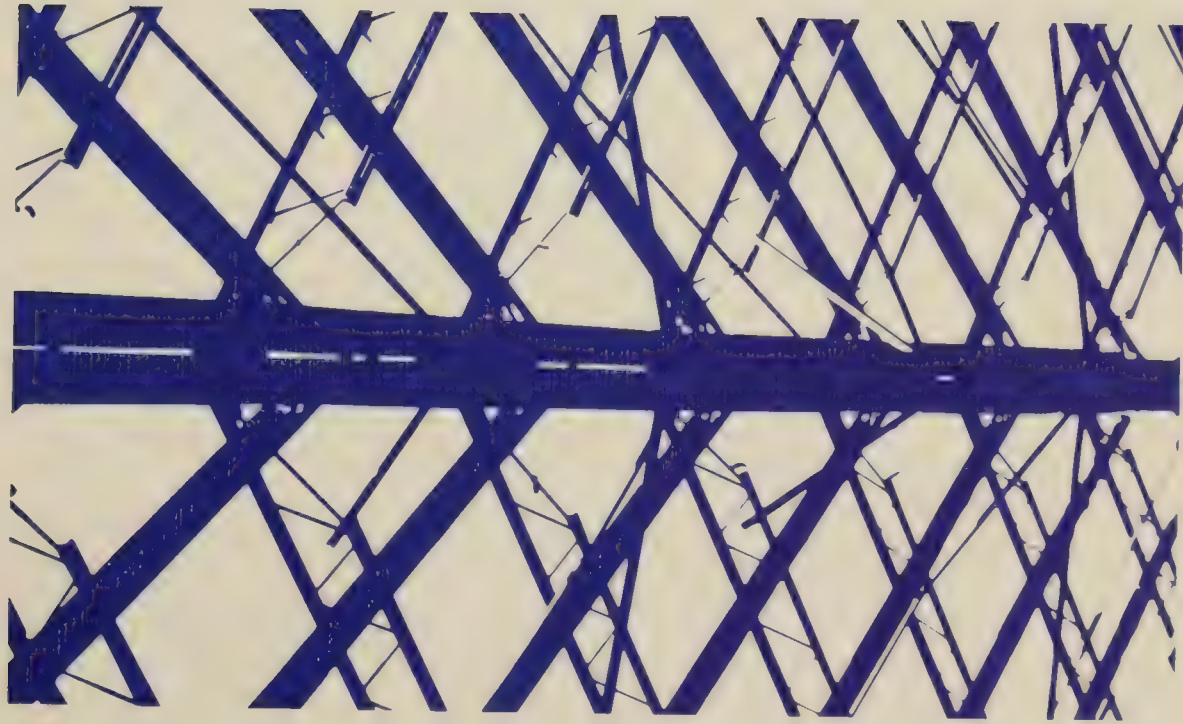
BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
37.	ARMORY ADDITION/ALTERATION, KALISPELL Expand and alter existing armory building to provide adequate space for the armories functions.	\$5,000		\$775,000		\$780,000
	DEPARTMENT OF MILITARY AFFAIRS					
	SUBTOTAL	\$3,482,600	\$0	\$22,378,500	\$0	\$25,861,100
	OFFICE OF PUBLIC INSTRUCTION					
1.	OFFICE BUILDING, HELENA Construct new Office of Public Education building to increase efficiency and to better serve the public.	\$2,017,500			\$4,000,000	\$6,017,500
	OFFICE OF PUBLIC INSTRUCTION					
	SUBTOTAL	\$2,017,500	\$0	\$0	\$4,000,000	\$6,017,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
SUMMARY OF PROJECT REQUESTS						
	Department of Administration	\$24,036,550	\$0	\$0	\$0	\$24,036,550
	Department of Commerce	\$0	\$0	\$465,957	\$51,773	\$517,730
	Department of Education	\$2,923,546	\$0	\$0	\$0	\$2,923,546
	Department of Family Services	\$5,116,638	\$0	\$0	\$0	\$5,116,638
	Department of Fish, Wildlife & Parks	\$0	\$11,601,356	\$2,296,000	\$0	\$13,897,356
	Department of Highways	\$0	\$1,727,025	\$0	\$0	\$1,727,025
	Department of Justice	\$17,558,119	\$0	\$0	\$0	\$17,558,119
	Department of Labor and Industry	\$0	\$0	\$310,000	\$0	\$310,000
	Department of State Lands	\$972,120	\$226,900	\$429,500	\$0	\$1,628,520
	Department of Military Affairs	\$3,482,600	\$0	\$22,378,500	\$0	\$25,861,100
	Office of Public Instruction	\$2,017,500	\$0	\$0	\$4,000,000	\$6,017,500
DEPARTMENT AND AGENCIES TOTAL						
		\$56,107,073	\$13,555,281	\$25,879,957	\$4,051,773	\$99,594,084



# Department Of Institutions





# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
DEPARTMENT OF INSTITUTIONS CENTRAL OFFICE LONG RANGE BUILDING PROGRAM PRIORITY LIST						
1.	Fire Alarm System, Montana State Hospital	\$299,760				\$299,760
2.	Fire Sprinkler System, Montana State Hospital	\$596,430				\$596,430
3.	Fence Renovation and Improvement, Montana Developmental Center	\$250,000				\$250,000
4.	Cover & Screen Patio Cottage 16AB, Montana Developmental Center	\$26,255				\$26,255
5.	Environmental Control System, Center for the Aged	\$837,600				\$837,600
6.	Underground Storage Tank Removal, Center for the Aged	\$6,180				\$6,180
7.	Underground Tank, Montana State Prison	\$206,300				\$206,300
8.	Storage Tank Monitoring System, Montana Developmental Center	\$9,603				\$9,603
9.	Prison Expansion Project, Montana State Prison	\$20,238,245				\$20,238,245

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
10.	New Womens' Prison, Women's Correction Center	\$11,967,000				\$11,967,000
11.	Resident Living Areas Flooring & Doors, Center for the Aged	\$74,125				\$74,125
12.	Flooring Projects, Montana State Hospital	\$248,552				\$248,552
13.	High Side Vo-Ed Bldg/Workshop, Montana State Prison			\$272,000		\$272,000
14.	PCB Removal-Both Campuses, Montana State Hospital	\$60,000				\$60,000
15.	Replace Water Lines, Montana Developmental Center	\$106,610				\$106,610
16.	Miscellaneous Improvements, Women's Correctional Center	\$7,290				\$7,290
17.	Roofing-Multipurpose Bldg, Eastmont Human Services Center	\$10,650				\$10,650
18.	Roof Replacements-Variou Buildings, Montana State Prison	\$55,000				\$55,000
19.	Repair Plumbing Bldg 9, Montana Developmental Center	\$42,598				\$42,598

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
20.	Flooring Bldg 104-Dental, Montana Developmental Center	\$9,090				\$9,090
21.	Heater Bldg 104, Montana Developmental Center	\$4,772				\$4,772
22.	Replace Septic System-Dairy, Montana State Prison				\$16,000	\$16,000
23.	Expansion Motor Vehicle Repair Facility, Montana State Prison				\$63,976	\$63,976
24.	Window Replacement, Montana State Hospital	\$173,647				\$173,647
25.	Kitchen Remodel-Cooler & Freezer, Center for the Aged	\$30,890				\$30,890
26.	Food Service Modernization-WS, Montana State Hospital	\$368,659				\$368,659
27.	Window Energy Retrofit, Montana Developmental Center	\$173,636				\$173,636
28.	Roof Maintenance-Duplexes, Montana State Hospital	\$44,928				\$44,928
29.	Painting for New Prison Facility, Montana State Prison	\$211,000				\$211,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
30.	Replace Wall Tile-Dairy, Montana State Prison				\$17,000	\$17,000
31.	Lighting Projects-Patient Areas, Montana State Hospital	\$30,859				\$30,859
32.	Paving Streets & Sidewalks, Montana State Hospital	\$1,276,610				\$1,276,610
33.	Seal Asphalt, Montana Veterans' Home	\$11,000				\$11,000
34.	Seal & Resurface Parking/Roads, Eastmont Human Services Center	\$26,625				\$26,625
35.	Relocate Wood Fired Boiler, Swan River Forest Camp	\$200,000				\$200,000
36.	Warehouse Expansion-WS, Montana State Hospital	\$248,292				\$248,292
37.	Tree Trimming & Removal, Montana State Hospital	\$23,400				\$23,400
TOTAL ALL PROJECTS		\$37,875,606	\$0	\$0	\$368,976	\$38,244,582



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
CENTRAL OFFICE					
1.	MSP CLOSE SECURITY EXPANSION Expand existing prison housing and support facilities to accommodate population growth.	\$20,238,245			\$20,238,245
CENTRAL OFFICE					
SUBTOTAL		\$20,238,245	\$0	\$0	\$20,238,245
EASTMONT HUMAN SERVICES CENTER					
1.	ROOF REPLACEMENT, MULTIPURPOSE BUILDING Replace roof to prevent leakage and future damage to structure and contents thereof.	\$10,650			\$10,650
2.	BASEMENT RENOVATION, MULTIPURPOSE BUILDING Install concrete slab with drainage, automatic sprinkler system and second exit to allow use of basement and to prevent deterioration of the structure.	\$116,085			\$116,085

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	SEWER SYSTEM MODIFICATION Install toilet facilities in garage and connect to sewer.	\$1,100				\$1,100
4.	ROAD/PARKING LOT MAINTENANCE Chip seal and/or resurface asphalt roads, drives and parking lots to prevent deterioration.	\$26,625				\$26,625
5.	PARKING LOT EXPANSION Expand existing parking lot to provide sufficient parking for staff.	\$19,596				\$19,596
6.	PAVE TRAFFIC CIRCLE Install asphalt paving to provide additional parking and to eliminate drainage and erosion damage.	\$29,287				\$29,287
EASTMONT HUMAN SERVICES CENTER						
SUBTOTAL		\$203,343	\$0	\$0	\$0	\$203,343

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
MONTANA CENTER FOR THE AGED						
1.	UNDERGROUND FUEL TANK REMOVAL Remove existing fuel tank to comply with State and Federal regulations.	\$6,180				\$6,180
2.	ENVIRONMENTAL CONTROL SYSTEM Install mechanical air handling system to bring facility into code compliance and to decrease health risks.	\$837,600				\$837,600
3.	MAINTENANCE SHOP AND WAREHOUSE ACCESS RENOVATION Construct a new maintenance shop and renovate access to storage rooms to provide adequate working conditions.	\$259,450				\$259,450
4.	KITCHEN EXPANSION Relocate walk-in freezer and cooler to provide sufficient room for portable food cart storage.	\$30,890				\$30,890

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
5.	RENOVATE RESIDENT LIVING AREAS Replace floor tile and exterior doors to create a safer, more energy efficient facility.	\$74,125			
					\$74,125
MONTANA CENTER FOR THE AGED					
	SUBTOTAL	\$1,208,245	\$0	\$0	\$1,208,245
MONTANA DEVELOPMENTAL CENTER					
1.	ELECTRICAL CODE INSPECTION AND CORRECTION, COTTAGES 10 - 15 Inspect junction boxes and replace faulty wiring where required to meet code requirements.	\$29,128			
					\$29,128
2.	WATER LINE REPLACEMENT, BUILDING 9 Replace water lines to reduce damage from leaks and conserve water.	\$42,598			
					\$42,598
3.	FLOORING REPLACEMENT, BUILDING 104 Replace existing flooring to eliminate health and safety hazards.	\$9,090			
					\$9,090



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
4.	HEATER UNIT MODIFICATIONS, BUILDING 104 Modify existing heating system to adequately heat clinic and x-ray areas.	\$4,772			\$4,772
5.	ENCLOSED PATIO CONSTRUCTION, COTTAGE 16AB Construct screened, covered patios to expand the opportunity for the physically handicapped residents to spend time outside.	\$26,255			\$26,255
6.	INSECT, RODENT AND VERMIN CONTROL Provide devices to deter flying insects, vermin and rodents from entering buildings.	\$13,422			\$13,422
7.	PAVING , PHASE II Repair and seal coat existing asphalt and pave roads and drives currently unpaved to prevent deterioration and reduce maintenance.	\$188,565			\$188,565
8.	WAREHOUSE BUILDING FLOOR REPLACEMENT Replace existing floor to reduce maintenance and improve safety conditions.	\$79,625			\$79,625

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds TOTAL
9.	WATER TANK SAFETY LADDER INSTALLATION Install safety ladder to provide access to the water tower and to reduce existing safety hazard.	\$15,716			\$15,716
10.	WATER LINE REPLACEMENT, CAMPUSWIDE Install new water lines to replace eroded steel pipes and to eliminate lead contamination of drinking water.	\$106,610			\$106,610
11.	WELL MODIFICATIONS Connect well #3 to automatic switching gear to insure an adequate emergency water supply.	\$19,432			\$19,432
12.	WINDOW REPLACEMENT, BUILDING 104 AND COTTAGE 50 Replace existing windows to increase energy efficiency and occupant comfort.	\$173,636			\$173,636
13.	BURIED TANK SURVEY Locate and install monitoring devices on all buried fuel tanks to comply with Federal and State regulations.	\$9,603			\$9,603

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
14.	BUILDING DEMOLITION Demolish existing unused or vacant buildings to reduce maintenance and to eliminate fire hazard.	\$76,000				\$76,000
MONTANA DEVELOPMENTAL CENTER						
SUBTOTAL		\$794,452	\$0	\$0	\$0	\$794,452
MONTANA STATE HOSPITAL						
1.	FIRE ALARM SYSTEM UPGRADE, CAMPUSWIDE Replace existing antiquated alarm system to improve safety conditions of facility.	\$299,760				\$299,760
2.	MAIN ENTRANCE RENOVATION, WARM SPRINGS Repair and/or replace deteriorated streets and sidewalks to improve access to the campus and reduce maintenance costs on vehicles.	\$330,798				\$330,798

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	ROAD REPAIR AND PAVING, SECOND & THIRD AVENUE Rebuild worm streets, pave dirt road, install new manhole covers and new sewers to eliminate holes and bumps.	\$285,987				\$285,987
4.	PAVE CONTINUATION OF C ST, WARM SPRINGS Pave unpaved roads and parking areas on the west side of campus.	\$192,874				\$192,874
5.	ROAD REPAIR, BOILER ROOM AREA, GALEN Repair existing paving and provide an overlay coat to eliminate holes and bumps.	\$47,808				\$47,808
6.	ROAD REPAIR AND PAVING, PINTLER LODGE, RECEIVING HOSPITAL, WARM SPRINGS Pave gravel roads and repair paved roads on the north side of campus.	\$121,567				\$121,567
7.	ROAD MAINTENANCE, 4TH AND 5TH AVE, WARM SPRINGS Rebuild deteriorated roads and replace cracked and uneven sidewalks.	\$187,556				\$187,556



# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
TOTAL					
8.	SEWER MANHOLE RELOCATION, DUPLEX AREA, WARM SPRINGS Relocate manhole covers over sewer line to facilitate sewer maintenance.	\$35,339			\$35,339
9.	PAVE ROADS, HOUSING AREA, WARM SPRINGS Pave dirt roads in housing area to reduce vehicle maintenance.	\$122,489			\$122,489
10.	KEY SYSTEM, WARM SPRINGS Install new key system to provide better security.	\$125,400			\$125,400
11.	KEY SYSTEM, GALEN Install new key system to provide better security.	\$31,200			\$31,200
12.	METAL BUILDING CONSTRUCTION, SEWAGE TREATMENT PLANT, GALEN Construct metal building to protect sewage treatment facility from freezing and discharging raw sewage into Clarks Fork river during the winter.	\$25,920			\$25,920
13.	MULTIPURPOSE BUILDING FLOORING, WARM SPRINGS Replace outdated flooring to improve safety and aesthetics of the building.	\$12,400			\$12,400

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
14.	RECEIVING HOSPITAL FLOORING, WARM SPRINGS Replace outdated floor tiles to improve safety and aesthetics of the building.	\$112,320			\$112,320
15.	FOOD CENTER FLOORING, WARM SPRINGS Replace damaged flooring to improve safety and sanitation of the food preparation area.	\$35,530			\$35,530
16.	TERRILL WING FLOORING, GALEN Replace flooring to improve safety and aesthetics of the building.	\$50,160			\$50,160
17.	GYM FLOOR REPLACEMENT, MULTIPURPOSE BUILDING, WARM SPRINGS Replace hardwood floor to eliminate unsuitable surface conditions.	\$88,302			\$88,302
18.	CROCKETT & TERRILL ROOF REPLACEMENT, GALEN Replace roof to prevent leakage and future damage to structures and contents.	\$96,246			\$96,246
19.	DUPLEX ROOFS, WARM SPRINGS Replace roofs to prevent leakage and future damage to structures and contents.	\$44,928			\$44,928

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
20.	FOOD SERVICE ROOF REPAIR, GALEN Repair roof on Food Service Building to prevent leakage and future damage to structure and contents.	\$59,392				\$59,392
21.	ALCOHOL SERVICE CENTER ROOF, GALEN Repair existing roof to prevent leakage and future damage to structure and contents.	\$102,410				\$102,410
22.	RECEIVING/ANNEX ROOF REPAIRS, GALEN Repair or replace roof to prevent leakage and future damage to structures and contents.	\$65,280				\$65,280
23.	GARAGE ROOF REPLACEMENT, GALEN Replace roof to prevent leakage and future damage to structures and contents.	\$2,803				\$2,803
24.	HANDICAPPED ACCESS MODIFICATIONS, ASC BUILDING Modify ASC building to eliminate licensing agency cited deficiency and to improve handicapped accessibility to facility.	\$14,400				\$14,400
25.	FIRE ALARM IMPROVEMENTS, ASC BUILDING, CROCKETT/TERRILL AND LIGHTHOUSE Install new fire alarm panel and wiring to replace outdated system.	\$150,000				\$150,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
26.	BUILDING DEMOLITION Demolish old and unusable buildings on both campuses which pose safety and fire hazards.	\$395,101				\$395,101
27.	SEWAGE PLANT DRYING BED, GALEN Construct sewage drying bed to bring existing sewage treatment plant into permit compliance.	\$5,720				\$5,720
28.	PCB REMOVAL, GALEN Remove and dispose of PCB fluid to reduce potential of exposure to carcinogenic material.	\$60,000				\$60,000
29.	TREE REMOVAL, WARM SPRINGS Replace old and dying trees as required to protect overhead wires and buildings from damage caused by falling branches.	\$23,400				\$23,400
30.	TREE TRIMMING AND REMOVAL, GALEN Trim and remove trees as required to protect overhead wires and buildings from damage caused by falling branches.	\$7,000				\$7,000
31.	FOOD SERVICE RENOVATION, WARM SPRINGS Renovate existing kitchen facilities to provide up-to-date equipment and to improve efficiency.	\$368,569				\$368,569



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
32.	FIRE SPRINKLER DINING HALL, WARM SPRINGS Install fire sprinklers to provide fire protection to residents, staff and building.	\$127,553				\$127,553
33.	FIRE SPRINKLER BAKERY, WARM SPRINGS Install fire sprinklers to protect areas staffed by both patients and employees.	\$12,280				\$12,280
34.	NURSE CALL SYSTEM, GALEN Install nurse call system to accommodate needs of patients and to satisfy requirements of regulating agencies.	\$52,000				\$52,000
35.	FIRE SPRINKLER SYSTEM, BUILDINGS CAMPUSWIDE, WARM SPRINGS Install fire detection and sprinkler systems as needed to protect occupants and property and to meet Life/Safety code requirements.	\$456,597				\$456,597
36.	FIRE SPRINKLER SYSTEM, HOSPITAL BUILDING, GALEN Install fire sprinkler system in patient occupied wings to meet code requirements and protect occupants.	\$248,547				\$248,547
37.	ELEVATOR LOCK-OUTS Modify elevators campuswide to prevent use during a fire and to comply with regulations.	\$47,025				\$47,025

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
38.	MODIFY FIRE HYDRANTS, GALEN Install valves on fire hydrants to allow maintenance without interrupting water supply to the entire campus.	\$11,756				\$11,756
39.	SMOKE DETECTORS, LIGHTHOUSE, GALEN Install smoke detectors to protect residents and property.	\$5,225				\$5,225
40.	REWIRE LIGHTHOUSE, GALEN Rewire Lighthouse to meet the increased electrical demand and code requirements.	\$15,392				\$15,392
41.	THERMOSTATS, LIGHTHOUSE, GALEN Replace existing radiator valves with thermostatically controlled valves to individually control temperatures.	\$1,274				\$1,274
42.	STORM WINDOWS, LIGHTHOUSE, GALEN Install storm windows to reduce energy costs and increase patient and staff comfort.	\$2,990				\$2,990
43.	CROCKETT PATIO RENOVATION Replace deteriorating quarry tile floor and install canopy to provide a suitable outdoor area for residents.	\$12,480				\$12,480

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
44.	VEHICLE STORAGE COMPOUND, GALEN Construct secure compound for patient vehicles to prevent unauthorized entry and tampering.	\$6,219			\$6,219
45.	INTAKE BUILDING MODIFICATION, WARM SPRINGS Expand and modify existing building to bring into compliance with licensing standards for psychiatric hospitals.	\$344,656			\$344,656
46.	WINDOW REPLACEMENT, CROCKETT/ TERRILL, GALEN Install new energy efficient window units to reduce energy cost and increase patient and staff comfort.	\$261,250			\$261,250
47.	WINDOW REPLACEMENT, RECEIVING HOSPITAL, WARM SPRINGS Install new energy efficient window units to reduce energy cost and increase patient and staff comfort.	\$80,256			\$80,256
48.	ENERGY RETROFIT, ADMINISTRATIVE ANNEX, WARM SPRINGS Replace windows, modify heating system and insulate attic to reduce energy costs. Repair deteriorating ornamentation for safety reasons.	\$93,391			\$93,391

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
49.	TRANSFORMER RELOCATION, GALEN Move transformers to new concrete pad, replace existing overhead wire, repair capacitors and high voltage lines to insure against power outage.	\$97,500			\$97,500
50.	WAREHOUSE EXPANSION, WARM SPRINGS Expand existing warehouse to consolidate warehouse functions, increase control and save energy.	\$248,292			\$248,292
51.	RENOVATE LIGHTING, WARM SPRINGS Replace existing incandescent fixtures with fluorescent fixtures to conserve energy.	\$30,859			\$30,859
52.	RENOVATE LIGHTING, GALEN Replace existing incandescent fixtures with fluorescent fixtures to conserve energy.	\$9,219			\$9,219
MONTANA STATE HOSPITAL					
SUBTOTAL		\$5,665,420	\$0	\$0	\$5,665,420



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

## FUNDING SOURCE

Priority	Agency/Project	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	TOTAL
MONTANA STATE PRISON						
1.	HIGH SECURITY TREATMENT UNIT Construct High Security Unit to provide appropriate facilities for court mandated treatment programs.	\$5,751,500				\$5,751,500
2.	HIGH SECURITY HOUSING UNIT Construct High Security Housing Unit to reduce prison overcrowding.	\$4,585,000				\$4,585,000
3.	LOW SECURITY HOUSING UNIT Construct Low Security Housing unit to reduce prison overcrowding.	\$2,792,000				\$2,792,000
4.	LOW SECURITY FOOD SERVICE EXPANSION Expand existing Food Service Building to accommodate the growth in prison population.	\$396,692				\$396,692
5.	SANITARY LANDFILL DUMP Close existing landfill and open a new landfill to meet proposed EPA regulations and to eliminate the future expense of monitoring existing landfill.	\$1,042,500				\$1,042,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
6.	UNDERGROUND TANK REPLACEMENT/ VEHICLE SERVICE FACILITY Replace existing underground fuel storage tanks to comply with State and Federal regulations. Construct a three stall service bay to better serve the fleet needs at the prison.	\$206,300			
7.	MOTOR VEHICLE REPAIR FACILITY EXPANSION Expand the Motor Vehicle Maintenance Facility to allow space for rebuilding passenger buses for the Transportation Division.				\$63,976
8.	WAREHOUSE EXPANSION Expand existing warehouse to accommodate population growth and to increase inventory security.	\$284,730			
9.	HIGH SECURITY INDUSTRY FACILITY Provide an industries building to enable high security inmates to participate in a productive, realistic work experience.				\$272,000
10.	HIGH SECURITY GYM EXPANSION Expand existing gym to eliminate overcrowding and to allow for future population growth.	\$523,800			
					\$206,300
					\$63,976
					\$284,730
					\$272,000
					\$523,800

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
11.	LOW SECURITY GYM Expand existing gym to eliminate overcrowding and to allow for future population growth.	\$411,000				\$411,000
12.	ADMINISTRATION BUILDING REMODEL Remodel Administration Building to meet existing needs and to allow for future expansion.	\$120,478				\$120,478
13.	ACCOUNTING/TRAINING BUILDING ADDITION Construct an addition to the Accounting/ Training Building to meet existing needs and to allow for future program expansion.	\$653,500				\$653,500
14.	CONSTRUCT SECURITY TOWER #6 Construct a tower to overlook the area of the new Low Security Housing.	\$109,928				\$109,928
15.	DAIRY DORMITORY REPLACEMENT Construct dormitory to provide housing for 50 inmates and to replace existing deteriorated temporary trailer housing.	\$905,850				\$905,850

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
16.	FENCE RENOVATION AND SECURITY IMPROVEMENT Modify fence perimeter and upgrade the security system in the Industries Compound to improve security integrity.	\$250,000				\$250,000
17.	DOMESTIC WATER STORAGE AND EMERGENCY POWER FOR PRODUCTION WELLS Increase water storage capacity and provide emergency power to wells.	\$517,570				\$517,570
18.	BOARD OF PARDONS ROOF REPLACEMENT Replace existing roof to prevent leaks and future water damage to structure and contents.	\$20,000				\$20,000
19.	CONLEY LAKE ROOF REPLACEMENT Replace existing roof to prevent leaks and future water damage to structure and contents.	\$25,000				\$25,000
20.	SATELLITE WAREHOUSE ROOF REPLACEMENT Replace existing roof to prevent leaks and future water damage to structure and contents.	\$10,000				\$10,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
21.	HANDICAPPED ACCESS ELEVATOR Install elevator to make building handicapped accessible.	\$96,500				\$96,500
22.	NEW PRISON FACILITY PAINTING Provide funding to paint new buildings left unpainted due to budget constraints.	\$211,000				\$211,000
23.	RELIGIOUS ACTIVITIES CENTER ADDITION Construct an addition to the Religious Activities Center to provide rest room and changing facilities.	\$29,200				\$29,200
24.	WALL TILE REPLACEMENT, DAIRY Replace tile to eliminate Health and Electrical code violations.				\$17,000	\$17,000
25.	SEPTIC SYSTEM REPLACEMENT, DAIRY Replace existing septic system to eliminate Health code violations.				\$16,000	\$16,000
MONTANA STATE PRISON SUBTOTAL		\$18,942,548	\$0	\$0	\$368,976	\$19,311,524

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
MONTANA VETERANS' HOME						
1.	SEAL COAT ASPHALT PAVING Seal coat existing asphalt paving to prevent continuing deterioration.	\$11,000				\$11,000
2.	OLD MAIN AND MENS' DORM DEMOLITIONS Demolish existing building to eliminate possible fire and safety hazards.	\$190,000				\$190,000
MONTANA VETERANS' HOME						
SUBTOTAL		\$201,000	\$0	\$0	\$0	\$201,000
SWAN RIVER FOREST CAMP						
1.	WOOD FIRED BOILER RELOCATION Relocate wood fired boiler to provide efficient and effective complex heating.	\$200,000				\$200,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
2.	SHOP BUILDING EXPANSION Construct an addition to the existing shop building to reduce overcrowding and improve training programs.	\$175,000			\$175,000
SWAN RIVER FOREST CAMP SUBTOTAL		\$375,000	\$0	\$0	\$375,000

## WOMEN'S CORRECTIONAL CENTER

1.	WOMEN'S PRISON Construct new Women's Prison to satisfy the needs of existing and future populations.	\$11,967,000			\$11,967,000
2.	EMERGENCY LIGHTING SYSTEM Provide emergency backup lighting to improve security in the event of a outage.	\$2,218			\$2,218
3.	HOT WATER SYSTEM MODIFICATION Attach hot water system to Montana State Hospitals' geothermal system to reduce maintenance expenditures.	\$3,088			\$3,088

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
4.	FLUORESCENT LIGHTING Replace incandescent lighting with fluorescent fixtures to reduce energy consumption and maintenance costs.	\$830			\$830
5.	INSULATE HOT WATER PIPES Install insulation on exposed hot water pipes to reduce heat loss and utility costs.	\$697			\$697
6.	INSTALL THERMOSTATS Install individual thermostats to regulate heat in areas with intermittent occupancy.	\$457			\$457
WOMEN'S CORRECTIONAL CENTER					
SUBTOTAL		\$11,974,290	\$0	\$0	\$11,974,290

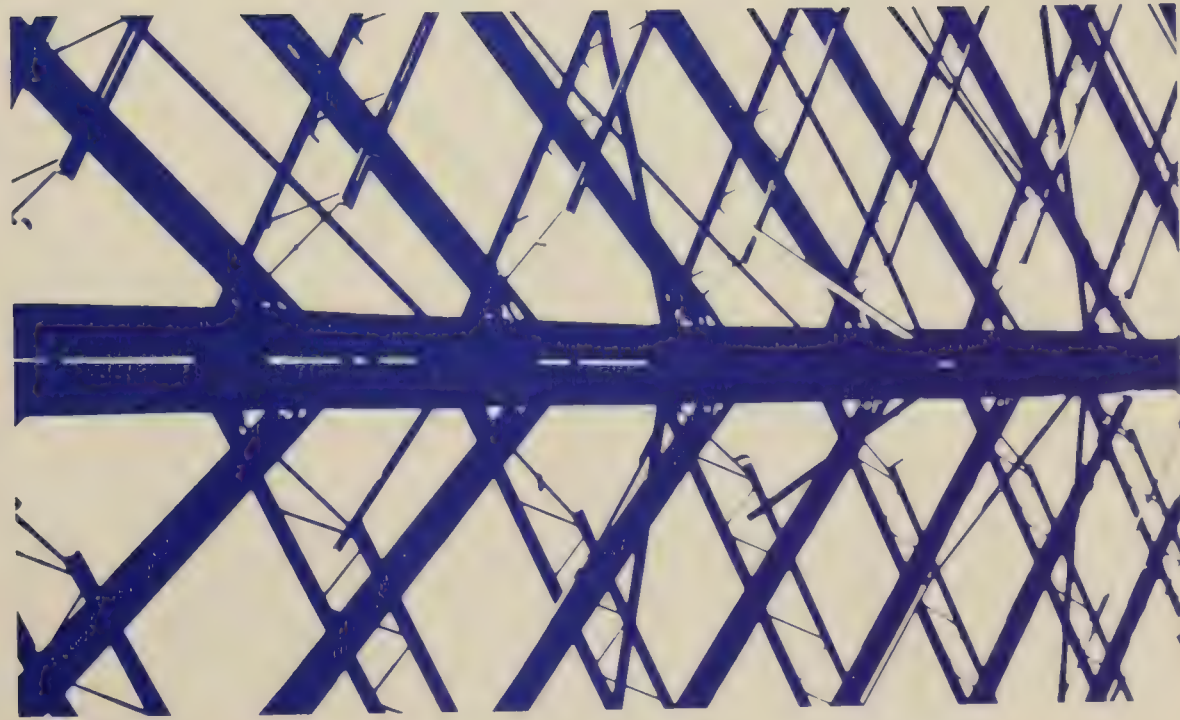


# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
SUMMARY OF REQUESTS - DEPARTMENT OF INSTITUTIONS						
	Central Office	\$20,238,245	\$0	\$0	\$0	\$20,238,245
	Eastmont Human Services Center	\$203,343	\$0	\$0	\$0	\$203,343
	Montana Center for the Aged	\$1,208,245	\$0	\$0	\$0	\$1,208,245
	Montana Developmental Center	\$794,452	\$0	\$0	\$0	\$794,452
	Montana State Hospital	\$5,665,420	\$0	\$0	\$0	\$5,665,420
	Montana State Prison	\$18,942,548	\$0	\$0	\$368,976	\$19,311,524
	Montana Veterans' Home	\$201,000	\$0	\$0	\$0	\$201,000
	Swan River Forest Camp	\$375,000	\$0	\$0	\$0	\$375,000
	Women's Correctional Center	\$11,974,290	\$0	\$0	\$0	\$11,974,290
		\$59,602,543	\$0	\$0	\$368,976	\$59,971,519





# Montana University System





# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

## FUNDING SOURCE

Priority	Agency/Project	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	TOTAL
MONTANA UNIVERSITY SYSTEM BOARD OF REGENTS OF HIGHER EDUCATION CAPITOL CONSTRUCTION PROJECT PRIORITY LIST						
HIGH PRIORITY PROJECTS						
1.	Eliminate PCB, Western Montana College	\$70,000				\$70,000
2.	Fire Alarm System Installation, University of Montana	\$70,000				\$70,000
3.	Replace and Upgrade Underground Storage Tanks, Montana University System and Vocational Technical Centers	\$379,100				\$379,100
4.	Handicapped Access, Montana University System	\$1,500,000				\$1,500,000
5.	Replace Carpet, Great Falls Vocational Technical Center	\$60,000				\$60,000
6.	Replace and Protect Steam and Condensate Lines, Montana State University	\$695,000				\$695,000
7.	Roof Repair and Replacement, Montana University System and Vocational Technical Centers	\$2,217,480				\$2,217,480

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

## FUNDING SOURCE

Priority	Agency/Project	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	TOTAL
8.	Asbestos Abatement, Montana University System	\$359,000				\$359,000
9.	Campus Projects, Eastern Montana College	\$325,000				\$325,000
10.	Science Building Fume Hood, Eastern Montana College	\$11,000				\$11,000
11.	Sprinkler System, Campus Projects, University of Montana	\$632,000				\$632,000
12.	Gaines Hall Fire Detection System, Montana State University	\$288,000				\$288,000
13.	Health and Safety Projects, of Montana	\$275,000				\$275,000
14.	Stair Enclosures and Second Exits, University of Montana	\$280,000				\$280,000
15.	Main Hall Restrooms, Montana Tech	\$59,400				\$59,400
16.	Fire Access and Hydrant Upgrades, University of Montana	\$182,000				\$182,000
17.	Instructional Kitchen Renovation, Montana Vocational Technical Center	\$65,000				\$65,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
18.	Renne Library Renovation, Montana State University	\$399,000				\$399,000
19.	Chemical/Pharmacy Renovation University of Montana	\$668,000				\$668,000
20.	Side Walk Replacements and Upgrade, University of Montana	\$367,920				\$367,920
21.	Facilities Audit, Montana University System, Agricultural Experiment Stations and Vocational Technical Centers	\$98,600			\$207,000	\$305,600
BOARD OF REGENTS OF HIGHER EDUCATION						
HIGH PRIORITY PROJECTS SUBTOTAL		\$9,001,500	\$0	\$0	\$207,000	\$9,208,500
MONTANA UNIVERSITY SYSTEM						
BOARD OF REGENTS OF HIGHER EDUCATION						
PRIORITY PROJECTS						
1.	Repair and Replacements for Central Heating Plant, Montana State University	\$1,490,000				\$1,490,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
2.	Tuckpointing and Caulking, University of Montana	\$267,200				\$267,200
3.	Primary Electrical Distribution, Eastern Montana College	\$350,000				\$350,000
4.	Tunnel Floor and Leak Repair, Montana Tech	\$41,400				\$41,400
5.	Tunnel Subsidence Study, Montana Tech	\$16,000				\$16,000
6.	Replace Windows, Cowan Hall, Northern Montana College	\$200,000				\$200,000
7.	Heating System Repairs, Western Montana College	\$135,500				\$135,500
8.	Refinish Stucco Facing, Helena Vocational Technical Center	\$25,000				\$25,000
9.	Diesel Exhaust System, Billings Vocational Technical Center	\$10,000				\$10,000
10.	Food Service and Commons Butte Vocational Technical Center	\$84,000				\$84,000
11.	Replace Library Humidification System, University of Montana	\$382,800				\$382,800



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
12.	Replace Natural Gas Main, Montana State University	\$98,000				\$98,000
13.	Lab Tables/Teaching Stations, Science Building, Eastern Montana College	\$25,000				\$25,000
14.	Heating and Cooling System, Education Building Eastern Montana College	435,000				\$435,000
15.	Window Retrofit, Museum Building, Montana Tech	\$142,000				\$142,000
16.	Water and Sewer Survey and Repairs Western Montana College	\$30,000				\$30,000
17.	Sidewalk Repair, Brockman Center, Northern Montana College	\$23,000				\$23,000
18.	Insulate Three Building, Montana Tech	\$18,800				\$18,800
19.	Renovate and Repair Classrooms, Montana State University	\$464,000				\$464,000
20.	Library Shelving, Phase I, University of Montana	\$353,500				\$353,500
21.	Art Area Modifications, Eastern Montana College	\$55,000				\$55,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
22.	Heating Controls and Steam Trap Repairs, Old Main, Western Montana College	\$21,000				\$21,000
23.	Corrosion Control Study, Northern Montana College	\$26,000				\$26,000
24.	Library Furnishing, Phase I, University of Montana	\$240,000				\$240,000
25.	Window Replacement, Eastern Montana College	\$297,000				\$297,000
26.	Replace Carpet, Mining Geology and Library, Montana Tech	\$51,300				\$51,300
27.	Electrical Loop, Montana Tech	\$414,000				\$414,000
28.	Repairs and Painting, Western Montana College	\$77,000				\$77,000
29.	Hot Water Tank and Heater Repairs, Western Montana College	\$12,500				\$12,500
30.	Replace Windows, Lindfield Hall, Montana State University	\$400,000				\$400,000
31.	Major Utilities, University of Montana	\$165,000				\$165,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
32.	University Theater Restoration, University of Montana	\$300,000				\$300,000
33.	Replace Fuel and Oil Tanks, Montana State University	\$100,000				\$100,000
34.	Temperature Controls, University of Montana	\$365,000				\$365,000
35.	Replace Windows, Montana Hall, Montana State University	\$110,000				\$110,000
36.	Auto Bridge, Eastern Montana College	\$156,000				\$156,000
37.	Heating System Renovation, Cowan Hall, Northern Montana College	\$73,000				\$73,000
38.	Exterior Repairs, Pershing Hall, Northern Montana College	\$92,500				\$92,500
39.	Replace Ventilation System, Reid Hall, Montana State University	\$880,000				\$880,000
40.	Heating Plant System Renovation, University of Montana	\$269,000				\$269,000
41.	Education Building Renovation, Eastern Montana College	\$50,000				\$50,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
42.	Office/Classroom Building Carpet Replacement, Western Montana College	\$31,000				\$31,000
43.	Old Main Classroom Renovation, Western Montana College	\$100,000				\$100,000
44.	Rankin Hall and Chemistry/Pharmacy Building Window Replacement, University of Montana	\$264,000				\$264,000
45.	Linfield Hall Renovation, Montana State University	\$245,000				\$245,000
46.	Herrick Hall Renovation, Montana State University	\$370,000				\$370,000
47.	Old Main Renovation, Western Montana College	\$2,695,680				\$2,695,680
48.	Law School Basement Library Renovation, University of Montana	\$390,000				\$390,000
49.	Science Complex Renovation, University of Montana	\$482,700				\$482,700
50.	Install Air Conditioning, Clinic, University of Montana	\$65,000				\$65,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
51.	Art Annex Renovation, University of Montana	\$348,300				\$348,300
52.	Ceiling Repairs and Replacements, University of Montana	\$282,200				\$282,200
53.	Miscellaneous Renovations, University of Montana	\$111,600				\$111,600
54.	Elevator Installations, Campuswide, University of Montana	\$1,888,000				\$1,888,000
BOARD OF REGENTS OF HIGHER EDUCATION PRIORITY PROJECTS SUBTOTAL		\$16,018,980	\$0	\$0	\$0	\$16,018,980
MONTANA UNIVERSITY SYSTEM BOARD OF REGENTS OF HIGHER EDUCATION BONDED PROGRAM RECOMMENDATIONS						
1.	Engineering/Physical Sciences Complex, Montana State University	\$22,235,000				\$22,235,000
2.	Business Administration Building, University of Montana	\$15,486,000				\$15,486,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	General Classroom/Office Building Expansion, Eastern Montana College	\$16,500,000				\$16,500,000
4.	Metallurgy Building Renovation, Montana Tech	\$3,845,000				\$3,845,000
5.	Donaldson Hall Remodeling, Northern Montana College	\$1,200,000				\$1,200,000
6.	Donaldson Building Addition, Helena Vocational Technical Center	\$1,296,685				\$1,296,685
7.	Building Completion, Southwestern Portion, Great Falls Vocational Technical Center	\$525,000				\$525,000
8.	Campus Development Planning, Missoula Vocational Technical Center	\$200,000				\$200,000
BOARD OF REGENTS OF HIGHER EDUCATION BONDED PROGRAM RECOMMENDATIONS		\$61,287,685	\$0	\$0	\$0	\$61,287,685

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
MONTANA UNIVERSITY SYSTEM BOARD OF REGENTS OF HIGHER EDUCATION						
AUTHORIZATION ONLY PROJECTS						
1.	Life Sciences Building, University of Montana			\$12,000,000		\$12,000,000
2.	Renovation of Fossil Storage Room 320, Science Complex, University of Montana				\$100,000	\$100,000
3.	Locker Room, Washington Grizzly Stadium, University of Montana				\$500,000	\$500,000
4.	Renovation of Centennial Oval, University of Montana				\$1,000,000	\$1,000,000
5.	Student Building Fee Projects, University of Montana				\$175,000	\$175,000
6.	Centennial Mall, Montana State University				\$1,600,000	\$1,600,000
7.	Agricultural/Life Science Bioscience Facility, Montana State University				\$16,000,000	\$16,000,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
8.	Student Union Remodeling, Western Montana College				\$600,000	\$600,000
BOARD OF REGENTS AUTHORIZATION ONLY PROJECTS						
		\$0	\$0	\$12,000,000	\$19,975,000	\$31,975,000
EASTERN MONTANA COLLEGE						
1.	GENERAL CLASSROOM AND OFFICE BUILDING EXPANSION Add nine additional floors to existing Special Education Building to accommodate growth.	\$16,500,000				\$16,500,000
2.	PHYSICAL EDUCATION BUILDING ASBESTOS ABATEMENT AND ROOF REPLACEMENT Remove asbestos ceiling material and replace roof to prevent leaks and protect the structure and contents.	\$650,000				\$650,000
3.	FIRE CODE COMPLIANCE Bring existing buildings into compliance with fire code.	\$325,000				\$325,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
4.	APSARUKE HALL RENOVATION Renovate residence hall to provide academic and administrative space.	\$1,300,000				\$1,300,000
5.	BUILDING ACCESS MODIFICATIONS Eliminate architectural barriers in various academic buildings.	\$62,000				\$62,000
6.	SCIENCE FUME HOOD Install fume hood in the Botany Lab to vent potentially dangerous fumes.	\$11,000				\$11,000
7.	LIBRARY ADDITION Construct an addition to the Library to accommodate increasing student use.	\$5,733,000				\$5,733,000
8.	ROOF REPLACEMENT, EDUCATION BUILDING Replace roof on the Education Building to prevent leaks and protect the structures and contents.	\$91,000				\$91,000
9.	PRIMARY ELECTRICAL DISTRIBUTION SYSTEM Replace the present underground wiring and building transformers with a 13,000 volt distribution system to provide more reliable power.	\$350,000			\$145,000	\$495,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
10.	LAB TABLES/TEACHING STATIONS, SCIENCE MICROBIOLOGY LAB Adapt the present Microbiology Lab to provide an acceptable teaching lab.	\$25,000			\$25,000
11.	HEATING AND COOLING SYSTEM, EDUCATION BUILDING Replace existing heating and cooling system to improve the teaching and learning environment.	\$435,000			\$435,000
12.	ART AREA MODIFICATION Renovate the Art Department area to comply with the recommendations of a national accreditation report.	\$55,000			\$55,000
13.	AUTO/PEDESTRIAN BRIDGE Replace existing auto bridge with one capable of carrying two lanes of traffic and a sidewalk to improve safety.	\$156,000			\$156,000
14.	WINDOW REPLACEMENT Replace windows in Cisel Hall, Education Building and Science Building to improve energy efficiency and occupant comfort.	\$297,000			\$297,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
15.	RENOVATE EDUCATION BUILDING Renovate existing building to provide suitable facilities for the Early Childhood and Day Care Programs.	\$50,000				\$50,000
16.	MASTER PLANNING AND UNDERGROUND SPRINKLING SYSTEM Provide planning for future expansion of campus. Expand underground sprinkler system to enhance the development of the grounds.	\$195,000				\$195,000
EASTERN MONTANA COLLEGE SUBTOTAL		\$26,235,000	\$0	\$0	\$145,000	\$26,380,000
MONTANA STATE UNIVERSITY						
1.	CENTENNIAL MALL, PHASE II. Develop a pedestrian mall on Garfield Street between 6th and 11th streets with private donations.				\$1,600,000	\$1,600,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
2.	AGRICULTURAL/LIFE SCIENCE COMPLEX Construct additions to the existing Plant Growth Center to provide sufficient space for the Agricultural/Life Science-Bioscience program.				\$16,000,000	\$16,000,000
3.	ENGINEERING/PHYSICAL SCIENCES COMPLEX Build new facilities and renovate existing to provide adequate laboratory and classroom space for the engineering and physical sciences programs.	\$22,235,000				\$22,235,000
4.	REPLACE & PROTECT CAMPUS STEAM & CONDENSATE LINES Replace deteriorated steam and condensate line to prevent catastrophic heating system breakdown.	\$695,000				\$695,000
5.	ROOF REPLACEMENT Replace roof on McCall Hall to prevent leakage and to avoid future water damage to structure and contents.	\$62,000				\$62,000
6.	HEATING PLANT MAJOR MAINTENANCE Upgrade burners, controls and boilers at the Heating Plant to provide reliable campuswide winter heating.	\$1,490,000				\$1,490,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
7.	CULBERTSON HALL RENOVATION Remodel Culbertson Hall to house the the Office of Systems and Computing Services in a single location.	\$360,000				\$360,000
8.	REPLACE CAMPUS LIGHTING SYSTEM Install new campuswide lighting system to insure pedestrian safety and security.	\$1,200,000				\$1,200,000
9.	NATURAL GAS MAIN REPLACEMENT Replace deteriorating steel natural gas line to curtail leakage and energy loss.	\$98,000				\$98,000
10.	CLASSROOM RENOVATION AND REPAIR Renovate and repair classrooms to provide effective instructional environments.	\$464,000				\$464,000
11.	RESURFACE GRANT STREET Resurface Grant Street to prevent further deterioration.	\$57,000				\$57,000
12.	WATER/SEWER/STEAM PIPING SYSTEMS SURVEY Survey existing buried lines to determine condition and provide a recommendation for repair or replacement.	\$73,000				\$73,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
13.	ASBESTOS ABATEMENT, PHASE II Remove or encapsulate existing asbestos to reduce potentially hazardous conditions.	\$200,000			\$200,000
14.	GAINES HALL FIRE DETECTION SYSTEM Install fire detection and suppression system to improve safety.	\$288,000			\$288,000
15.	HANDICAPPED MODIFICATIONS Provide modifications to increase use and accessibility for the mobility impaired.	\$661,000			\$661,000
16.	CENTRAL STORAGE AND MAINTENANCE FACILITY Construct an addition to existing Physical Plant to consolidate Central Stores and craft shops.	\$660,000			\$660,000
17.	RENNE LIBRARY REMODEL Finish the unfinished basement area to expand usable space and relieve overcrowding in remainder of building.	\$399,000			\$399,000
18.	REPLACE LINFIELD HALL WINDOWS Replace deteriorated windows in Linfield Hall to improve energy efficiency and occupant comfort.	\$400,000			\$400,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
19.	REPLACE FUEL AND OIL TANKS Replace existing underground storage tanks to comply with Federal regulations.	\$100,000				\$100,000
20.	REPLACE MONTANA HALL WINDOWS Replace deteriorated windows in Montana Hall to improve energy efficiency and occupant comfort.	\$110,000				\$110,000
21.	REPLACE REID HALL VENTILATION SYSTEM Install a new ventilation system to provide adequate temperature control and ventilation.	\$880,000				\$880,000
22.	LINFIELD HALL REMODELING Renovate existing facility to provide needed office and laboratory space.	\$245,000				\$245,000
23.	HERRICK HALL RENOVATION Remodel fourth floor and basement to meet fire codes, provide handicapped access and make a usable, safe, area for expansion of programs.	\$370,000				\$370,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
24.	REPLACE HAMILTON HALL Demolish and replace deteriorating structure to meet campus demand.	\$1,726,000			\$1,726,000
MONTANA STATE UNIVERSITY					
SUBTOTAL		\$32,773,000	\$0	\$0	\$17,600,000
MONTANA STATE UNIVERSITY, AGRICULTURAL EXPERIMENT STATIONS					
1.	ANIMAL SCIENCE MACHINE SHOP Construct a machine shop and an unheated storage barn to replace existing deteriorated and unsafe structure.	\$175,000			\$175,000
2.	HORTICULTURE GREENHOUSE, CORVALLIS Construct a new greenhouse to provide adequate facilities for research and experimentation.	\$125,000			\$125,000
3.	MACHINE SHOP, HAVRE Construct a machine shop to accommodate large equipment repair.	\$150,000			\$150,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
4.	REPLACE FUEL & OIL TANKS, STATEWIDE Replace and monitor existing underground storage tanks to comply with Federal regulations.	\$48,000				\$48,000
5.	MAJOR MAINTENANCE, SYSTEMWIDE Maintain Agricultural Experiment Stations statewide to prevent further deterioration.	\$120,500				\$120,500
6.	HADLEIGH MARSH LABORATORY RENOVATION, BOZEMAN Renovate existing environmental control and electrical systems to update facility.	\$93,000				\$93,000
7.	FIELD SERVICE BUILDING, BOZEMAN Construct Field Service Facility to accommodate service laboratories.	\$500,000				\$500,000
MSU AGRICULTURAL EXPERIMENT STATIONS SUBTOTAL		\$1,211,500	\$0	\$0	\$0	\$1,211,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY						
1.	TUNNEL REPAIR Repair floor and waterproof pedestrian tunnels to eliminate safety hazards.	\$41,400				\$41,400
2.	REPAIR CAMPUS STAIRS Repair deteriorated concrete stairs to improve pedestrian safety.	\$20,200				\$20,200
3.	REMOVE MILL BUILDING STACK Remove Mill Building stack to eliminate safety hazard.	\$11,200				\$11,200
4.	HANDICAPPED MODIFICATIONS, ENGINEERING HALL Install handicapped accessible women's rest room on first floor of the Engineering Building.	\$75,000				\$75,000
5.	HANDICAPPED MODIFICATIONS, MUSEUM BUILDING Install a passenger elevator to improve handicapped accessibility.	\$156,800				\$156,800
6.	ENGINEERING STUDY, UTILITY TUNNEL Conduct an engineering study to examine utility tunnel settling and prepare a plan to repair damage.	\$16,000				\$16,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
7.	WINDOW RETROFIT, LIBRARY/MUSEUM Replace steel framed windows to improve energy efficiency and user comfort.	\$142,000				\$142,000
8.	INSULATE BUILDINGS Insulate Engineering Hall, Main Hall and Physical Plant Building to improve energy conservation.	\$18,800				\$18,800
9.	EXTERIOR PAINTING Paint trim on the Mill Building and Engineering Hall to prevent deterioration.	\$10,500				\$10,500
10.	REST ROOM RENOVATION, MAIN HALL Renovate outdated basement rest rooms to improve appearance and accessibility.	\$59,400				\$59,400
11.	FLOOR COVERINGS, MINING/GEOLOGY BUILDING AND LIBRARY Replace worn carpets to improve appearance and safety.	\$51,300				\$51,300
12.	METALLURGY BUILDING RENOVATION Renovate existing facility to provide adequate student/facility space; update utilities and labs and improve safety.	\$3,845,000				\$3,845,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
13.	ENGINEERING HALL RENOVATION Renovate existing facility to better utilize classrooms, provide office space and consolidate student services.	\$224,000				\$224,000
14.	ELECTRICAL LOOP SYSTEM Develop an electric loop system to prevent major shutdowns and reduce "down" time throughout the campus.	\$414,000				\$414,000
15.	DRILL CAMPUS WELL Drill campus operated well to use for lawn watering and to decrease dependence on city water supply.	\$38,000				\$38,000
16.	GRANITE STREET EXTENSION PAVING Pave gravel road to improve safety and reduce maintenance.	\$95,000				\$95,000
17.	PROPERTY ACQUISITION Acquire property located in the interior of campus to provide for organized future expansion.	\$100,000				\$100,000
MONTANA TECH SUBTOTALS		\$5,318,600	\$0	\$0	\$0	\$5,318,600



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
NORTHERN MONTANA COLLEGE						
1.	REMODEL DONALDSON HALL Renovate two floors of existing building to meet fire code requirements, to improve handicapped accessibility and to make vacant space usable.	\$1,200,000				\$1,200,000
2.	HANDICAPPED ACCESS, ELECTRONICS BUILDING Install an elevator to provide access between floors of the Electronics Building and for access to the lower campus.	\$170,500				\$170,500
3.	MULTI-USE TECHNOLOGY BUILDING Construct a building to alleviate over crowding in buildings and to improve instructional facilities.	\$8,000,000				\$8,000,000
4.	GYMNASIUM ENTRY REMODEL Remodel Gym entry to provide additional lobby space, a new ticket booth and improved handicapped access.	\$200,000				\$200,000
5.	COWAN HALL WINDOW REPLACEMENT Replace existing single pane steel sash windows to improve energy efficiency and employee comfort.	\$200,000				\$200,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
6.	HANDICAPPED ACCESSIBILITY MODIFICATIONS Modify several buildings on campus to make existing facilities more suitable for use by the physically handicapped.	\$75,000			\$75,000
7.	BROCKMAN CENTER SIDEWALK REPAIR Replace uneven and sloping sidewalk to provide a safe walking surface between campus buildings.	\$23,000			\$23,000
8.	REPAIR STREETS AND SEAL COAT Repair damaged sections of streets and chip seal to extend useful life of the pavement.	\$85,000			\$85,000
9.	CORROSION CONTROL STUDY Survey existing buried lines to determine extent of existing corrosion problem and develop remedial strategy.	\$26,000			\$26,000
10.	LIBRARY EXPANSION Construct addition to existing library to relieve overcrowding and to expand present library capabilities.	\$2,500,000			\$2,500,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
11.	REPLACE ROOF - MAIN GYMNASIUM Replace deteriorated built-up roof with new single-ply membrane roof and additional insulation.	\$84,000				\$84,000
12.	RENOVATE HEATING SYSTEM, COWAN HALL Renovate existing heating system to improve energy efficiency, control temperatures and reduce maintenance.	\$73,000				\$73,000
13.	EXTERIOR REPAIRS, PERSHING HALL Provide exterior repairs to preserve the historic heritage of the building and to prevent further deterioration.	\$92,500				\$92,500
14.	CENTRAL RECEIVING AND STORAGE BUILDING Construct a new central receiving and storage facility to eliminate over crowding and the need to rent space.	\$300,000				\$300,000
15.	GYMNASIUM HEATING RENOVATIONS Renovate Gym heating system to improve energy efficiency, lower maintenance costs and improve user comfort.	\$151,000				\$151,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	L.R.B.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
16.	CONSTRUCT GYMNASIUM Construct new gymnasium to replace obsolete existing Gym and to provide adequate room for instructional and recreational functions.	\$8,800,000				\$8,800,000
NORTHERN MONTANA COLLEGE						
SUBTOTAL		\$21,980,000	\$0	\$0	\$0	\$21,980,000
UNIVERSITY OF MONTANA						
1.	BUSINESS ADMINISTRATION BUILDING Construct a new School of Business building to replace existing inadequate facilities and consolidate the program.	\$15,486,000				\$15,486,000
2.	HANDICAPPED ACCESS MODIFICATION, CAMPUSWIDE Modify building to allow access to facilities, classrooms and programs by physically impaired individuals.	\$1,800,075				\$1,800,075
3.	SIDEWALK REPLACEMENT AND UPGRADES Replace sidewalks to improve safety and appearance of campus.	\$367,920				\$367,920



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
4.	UNDERGROUND STORAGE TANK REPLACEMENT Replace underground storage tanks to comply with State and Federal regulations.	\$180,600				\$180,600
5.	FIRE ACCESS AND HYDRANT UPGRADE Renovate fire fighting access routes, remove safety hazards and upgrade fire hydrants to improve public safety.	\$182,900				\$182,900
6.	FIRE PROTECTION, RANKIN HALL Install fire sprinkler systems and smoke detectors to protect occupants and building from fire.	\$208,000				\$208,000
7.	FIRE PROTECTION, UNIVERSITY HALL Install fire sprinkler systems and smoke detectors to protect occupants and buildings from fire.	\$424,000				\$424,000
8.	LIFE SAFETY PROJECTS, CAMPUSWIDE Complete life safety projects to reduce the risk of loss of life and property due to existing hazardous conditions.	\$345,000				\$345,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
9.	STAIR ENCLOSURE AND SECOND EXITS Enclose stairs and provide second exits to improve safety and comply with fire and building code requirements.	\$280,000			\$280,000
10.	MAJOR MAINTENANCE, ROOFS Repair or replace roofs as needed to prevent leakage and to avoid future water damage to structures and contents.	\$582,000			\$582,000
11.	TUCKPOINT BUILDINGS, CAMPUSWIDE Tuckpoint, caulk and clean exterior building masonry to protect interior finishes and preserve exterior facades.	\$267,200			\$267,200
12.	HUMIDIFICATION SYSTEM REPLACEMENT, MANSFIELD LIBRARY Replace deactivated humidification system to preserve Library holdings.	\$382,800			\$382,800
13.	LANDSCAPING RENOVATION, CAMPUSWIDE Complete construction of retaining walls near Schreiber Gym and Building #32 to alleviate erosion.	\$170,000			\$170,000
14.	LIBRARY SHELVING, PHASE I Provide a compact storage system to accommodate growing archives collection.	\$353,500			\$353,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds TOTAL
15.	LIBRARY FURNISHINGS, PHASE I. Provide additional seating and desks in the Library to meet current standards and replace outdated furniture.	\$240,800			\$240,800
16.	MAJOR MAINTENANCE, UTILITIES Replace steam lines to Rankin Hall, install a backup steam line and replace failing sewer and water lines.	\$310,600			\$310,600
17.	BUILDING SYSTEMS MAJOR MAINTENANCE Renovate deficient building systems campuswide to improve the utility and safety of the facility.	\$200,000			\$200,000
18.	UNIVERSITY THEATER RENOVATION Renovate the University Theater to provide an effective instructional environment.	\$300,000			\$300,000
19.	TEMPERATURE CONTROLS REPLACEMENT, CAMPUSWIDE Update obsolete and deteriorating temperature control systems to improve energy efficiency.	\$365,000			\$365,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
20.	HEATING PLANT RENOVATION Install emergency backup system and repair existing system to assure emergency operational capabilities.	\$269,000				\$269,000
21.	WINDOW RENOVATION, CAMPUSWIDE Replace or repair deteriorated windows to make existing facilities more comfortable and energy efficient.	\$264,000				\$264,000
22.	ELEVATOR INSTALLATION, CAMPUSWIDE Install elevators campuswide to allow access to upper floors by physically impaired individuals.	\$1,888,000				\$1,888,000
23.	ASBESTOS ABATEMENT, HEALTH SCIENCE BUILDING Encapsulate or remove and dispose of asbestos containing materials within existing facility to reduce potentially hazardous condition.	\$478,500				\$478,500
24.	ASBESTOS ABATEMENT, CAMPUSWIDE Encapsulate or remove and dispose of asbestos containing materials within existing facilities to reduce potentially hazardous conditions.	\$500,500				\$500,500



# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
25.	CHEMISTRY/PHARMACY RENOVATIONS Renovate laboratory space to more effectively accommodate laboratory classes and research space.	\$668,000				\$668,000
26.	LAW SCHOOL BASEMENT RENOVATION Renovate uncompleted basement annex to provide a library for holdings, research and study.	\$390,000				\$390,000
27.	SCIENCE COMPLEX RENOVATIONS Renovate deficient areas of the Science Complex to improve the utility and safety of the facility.	\$482,700				\$482,700
28.	AIR CONDITIONING INSTALLATION, CLINICAL PSYCHOLOGY Install air conditioning system to provide year round user comfort.	\$65,000				\$65,000
29.	ART ANNEX RENOVATION Reconstruct the buildings deteriorated facade and construct a secure outdoor sculpture studio.	\$348,300				\$348,300
30.	MAJOR MAINTENANCE, CEILINGS Install dropped ceilings in several buildings to reduce heating costs and conceal deteriorated ceilings.	\$282,200				\$282,200

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
31.	MISCELLANEOUS RENOVATIONS Renovate the Social Science and Health Science Buildings to provide a more effective instructional environment.	\$111,600			\$111,600
32.	PAVE BUILDING #32 COMPOUND Pave parking compound to reduce maintenance costs and to eliminate drainage and erosion damage.	\$150,000			\$150,000
33.	CLOVERBOWL RENOVATION, PHASE I. Renovate Cloverbowl field to improve appearance and safety.	\$332,300			\$332,300
34.	PLANNING, CAMPUSWIDE Provide planning for new facilities and renovation of existing structures to eliminate overcrowding.	\$475,000			\$475,000
35.	PROPERTY ACQUISITION, PHASE I. Acquire property to provide for future campus development.	\$428,000			\$428,000
36.	BOTANY ANNEX AND GREENHOUSE RENOVATION Renovate antiquated facility to improve instructional effectiveness.	\$210,500			\$210,500

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
37.	SPENDING AUTHORITY				
	Establish Legislative Spending				
	Authority for renovation and new				
	construction projects which would be			\$12,000,000	\$2,584,600
	funded from Federal, Private or Campus				
	sources.				\$14,584,600
UNIVERSITY OF MONTANA					
SUBTOTAL		\$29,789,995	\$0	\$12,000,000	\$2,584,600
WESTERN MONTANA COLLEGE					
1.	ELIMINATE PCB'S	\$70,000			\$70,000
	Reduce hazardous materials to meet				
	Federal mandates and reduce liability.				
2.	ASBESTOS ABATEMENT	\$159,000			\$159,000
	Encapsulate or remove and dispose of				
	asbestos containing materials within				
	existing facilities to reduce				
	potentially hazardous conditions.				

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	UNDERGROUND STORAGE TANK REPLACEMENT Replace existing underground storage tanks to comply with Federal and State regulations.	\$38,500				\$38,500
4.	HANDICAPPED ACCESS, AUDITORIUM Install elevator to allow access to Auditorium by physically impaired individuals.	\$326,536				\$326,536
5.	HANDICAPPED ACCESS, PE CLASSROOM BUILDING Install handicapped lift to allow access to second and third floors by physically impaired individuals.	\$25,000				\$25,000
6.	HEATING SYSTEM REPAIRS Install emergency backup system and repair existing system to assure emergency operational capabilities.	\$135,500				\$135,500
7.	WATER AND SEWER SYSTEM SURVEY & REPAIRS Survey water and sewer systems to locate problems and to provide a recommendation for repair or replacement.	\$30,000				\$30,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
8.	ROOF REPLACEMENT, ARTS & CRAFTS BUILDING Replace roof on Arts and Crafts building to prevent leakage and to avoid water damage to structure and contents.	\$20,330				\$20,330
9.	ROOF REPLACEMENT, AUDITORIUM Replace roof on the Auditorium to prevent leakage and to avoid water damage to structure and contents.	\$37,800				\$37,800
10.	ROOF MAINTENANCE Repair roofs campuswide to extend the life of the roofs, avoid leakage and costly replacement.	\$25,000				\$25,000
11.	HEATING CONTROL MODIFICATIONS, OLD MAIN Provide individual radiator thermostats to increase energy conservation and provide comfort in teaching spaces.	\$21,000				\$21,000
12.	REPAIR LIBRARY SOFFIT AND FASCIA Provide ventilation to remove moisture causing soffit deterioration and repair damaged soffit and fascia.	\$28,251				\$28,251

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds TOTAL
13.	REPAIRS AND PAINTING, CAMPUSWIDE Repair and paint buildings to prevent further deterioration.	\$77,000			\$77,000
14.	REPAIR IRRIGATION DITCH Repair irrigation ditch to prevent further deterioration and potential collapse.	\$6,000			\$6,000
15.	HOT WATER TANK AND HEATER REPLACEMENT Replace hot water tanks and steam coils to reduce high operational costs.	\$12,500			\$12,500
16.	RESURFACE TENNIS COURTS Resurface tennis courts to prevent further deterioration and to eliminate safety hazard.	\$32,000			\$32,000
17.	RESURFACE PARKING LOTS AND ROADWAYS Repair asphalt paving to prevent further deterioration.	\$275,000			\$275,000
18.	SIDEWALK REPLACEMENT Replace several sections of cracked and heaving sidewalks to reduce hazards to pedestrians.	\$28,000			\$28,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
19.	ENERGY MANAGEMENT SURVEY Survey existing energy use to determine areas of potential energy savings and to develop an energy management plan.	\$52,000				\$52,000
20.	REPLACE CARPETING, CAMPUSWIDE Replace worn carpets to improve appearance and safety.	\$31,000				\$31,000
21.	REMODEL CLASSROOMS Renovate and repair classrooms to provide effective instructional environments.	\$100,000				\$100,000
22.	ARENA FLOOR RENOVATION, PE CLASSROOM BUILDING Install a new floor over the existing dirt floor to increase usable space and decrease cleaning problems.	\$104,800				\$104,800
23.	MAIN HALL RENOVATION Renovate mechanical systems and provide general remodeling to update existing facility.	\$2,695,680				\$2,695,680
24.	CONSTRUCT EAST CAMPUS PARKING Develop a new parking lot to relieve congestion at existing lots.	\$50,000				\$50,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
25.	RURAL EDUCATION CLASSROOM/ OFFICE BUILDING Construct new Rural Education Classroom and Office building to provide sufficient area for program expansion.	\$560,000			\$560,000
26.	LAND ACQUISITION Acquire land to provide for future campus expansion.	\$110,000			\$110,000
27.	REMODEL STUDENT UNION BUILDING Renovate and expand Student Union Building to accommodate current student needs.				\$600,000
WESTERN MONTANA COLLEGE					
SUBTOTAL		\$5,050,897	\$0	\$0	\$5,650,897

## BILLINGS VOCATIONAL TECHNICAL CENTER

1.	ROOF COATING, PHASE I. Coat roof to prevent deterioration, leakage and to avoid water damage to structure and contents.	\$20,000			\$20,000
----	--	----------	--	--	----------



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
2.	DIESEL EXHAUST SYSTEM Install diesel exhaust system to decrease safety hazard.	\$10,000				\$10,000
3.	BALANCE HVAC SYSTEM Balance heating, ventilation and cooling system to improve efficiency and occupant comfort.	\$20,000				\$20,000
4.	OUTSIDE DRAINAGE SYSTEM Provide outside drainage system to improve facility.	\$15,000				\$15,000
5.	PARKING LOT IMPROVEMENTS Chip seal and stripe existing parking lots to improve parking facilities.	\$10,000				\$10,000
BILLINGS VOCATIONAL TECHNICAL CENTER		\$75,000	\$0	\$0	\$0	\$75,000
SUBTOTAL						
BUTTE VOCATIONAL TECHNICAL CENTER						
1.	MAINTENANCE AND STORAGE BUILDING Construct new building to comply with state safety and fire codes and to provide secure storage for materials and equipment.	\$202,885				\$202,885

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
2.	OUTSIDE STORAGE AREA IMPROVEMENTS Enclose outside storage areas to protect equipment from theft and exposure to the weather.	\$16,000			\$16,000
3.	ENTRANCE COVER, WELDING GAS STORAGE AREA Install walkway and entrance cover to eliminate snow and ice safety hazard.	\$12,500			\$12,500
4.	VENTILATION INSTALLATION, COMMONS AREA Improve ventilation and install a "smoke-eater" in improve the air quality of the commons area.	\$11,000			\$11,000
5.	AIR CONDITIONING INSTALLATION, KITCHEN AND FOOD SERVICE AREA Install air conditioning to improve health and working environment in kitchen and food services area.	\$8,000			\$8,000
6.	PARKING LOT AND DRIVEWAY REPAIRS Chip seal existing parking lots and driveways to prevent further deterioration.	\$15,000			\$15,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
7.	RENOVATE FOOD SERVICE AND KITCHEN Renovate food service area and kitchen to provide efficient service.	\$65,000				\$65,000
8.	ALUMINUM ROOF COATING Coat roof to prevent deterioration, leakage and to avoid water damage to structure and contents.	\$15,000				\$15,000
BUTTE VOCATIONAL TECHNICAL CENTER SUBTOTAL		\$345,385	\$0	\$0	\$0	\$345,385
GREAT FALLS VOCATIONAL TECHNICAL CENTER						
1.	CARPET REPLACEMENT Replace deteriorated carpet to improve aesthetics and correct the safety hazard.	\$60,000				\$60,000
2.	HANDICAPPED MODIFICATIONS Modify main entrance to improve access to facility by physically impaired individuals.	\$10,000				\$10,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	REROOF AND INSULATE BUILDING Apply new roof to prevent leakage and avoid water damage to structure and contents. Insulate to conserve energy.	\$400,000				\$400,000
4.	PAVE PARKING LOTS Pave parking lots to reduce dust, mud and maintenance problems and to maximize lot capacity.	\$255,000				\$255,000
5.	SEAL PARKING LOTS Seal existing asphalt parking lots to prevent further deterioration.	(cost not given)				(cost not given)
6.	BUILDING RENOVATION, SOUTHWEST SECTION Complete the interior of the southwest section of the building to increase program facilities and to reduce classroom overcrowding.	\$525,000				\$525,000
GREAT FALLS VOCATIONAL TECHNICAL CENTER		\$1,250,000	\$0	\$0	\$0	\$1,250,000
SUBTOTAL						



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
HELENA VOCATIONAL TECHNICAL CENTER						
1.	REROOF AND INSULATE DONALDSON BUILDING Apply new roof to prevent leakage and avoid water damage to structure and contents. Insulate to conserve energy.	\$230,350				\$230,350
2.	DONALDSON BUILDING ADDITION Construct an addition to the Donaldson Building to provide student services and to replace deteriorated trailers.	\$1,296,685				\$1,296,685
3.	REFINISH STUCCO, POPLAR STREET BUILDING Repair existing stucco finish to prevent further deterioration and improve appearance.	\$25,000				\$25,000
HELENA VOCATIONAL TECHNICAL CENTER SUBTOTAL						
		\$1,552,035	\$0	\$0	\$0	\$1,552,035

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
MISSOULA VOCATIONAL TECHNICAL CENTER						
1.	WASTE WATER TREATMENT PROGRAM Install a waste water disposal system to comply with Federal regulations.	\$50,000				\$50,000
2.	MVTC CAMPUS PLANNING Develope long range campus master plan to facilitate organized campus development.	\$200,000				\$200,000
3.	TRUCK DRIVER TRAINING RANGE Construct paved driving range to provide a location for the training of Commercial Truck Operation students.	\$129,800				\$129,800
4.	INSTRUCTIONAL KITCHEN RENOVATION Renovate outdated facility to improve efficiency, safety conditions and instructional effectiveness.	\$65,000				\$65,000
5.	ENERGY CONSERVATION, CAMPUSWIDE Perform energy conservation measures to save energy and provide a healthy, comfortable environment.	\$180,000				\$180,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
<hr/>					
MISSOULA VOCATIONAL TECHNICAL CENTER					
<hr/>					
SUBTOTAL		\$624,800	\$0	\$0	\$624,800
<hr/>					
<hr/>					

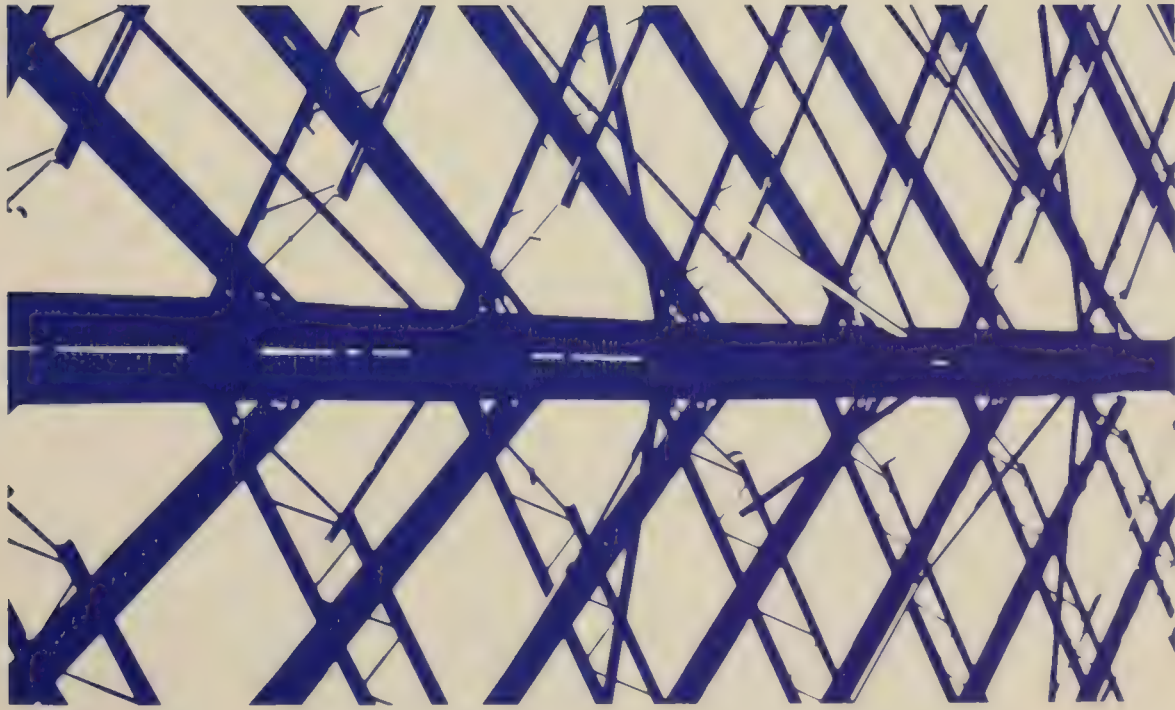
# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1992 - 1993 BIENNIIUM

## FUNDING SOURCE

Priority	Agency/Project	L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	TOTAL
SUMMARY OF PROJECT REQUESTS - UNIVERSITY SYSTEM						
	Eastern Montana College	\$26,235,000	\$0	\$0	\$145,000	\$26,380,000
	Montana State University	\$32,773,000	\$0	\$0	\$17,600,000	\$50,373,000
	MSU Agricultural Experiment Stations	\$1,211,500	\$0	\$0	\$0	\$1,211,500
	Montana Tech	\$5,318,600	\$0	\$0	\$0	\$5,318,600
	Northern Montana College	\$21,980,000	\$0	\$0	\$0	\$21,980,000
	University of Montana	\$29,789,995	\$0	\$12,000,000	\$2,584,600	\$44,374,595
	Western Montana College	\$5,050,897	\$0	\$0	\$600,000	\$5,650,897
	Billings Vocational Technical Center	\$75,000	\$0	\$0	\$0	\$75,000
	Butte Vocational Technical Center	\$345,385	\$0	\$0	\$0	\$345,385
	Great Falls Vocational Technical Center	\$1,250,000	\$0	\$0	\$0	\$1,250,000
	Helena Vocational Technical Center	\$1,552,035	\$0	\$0	\$0	\$1,552,035
	Missoula Vocational Technical Center	\$624,800	\$0	\$0	\$0	\$624,800
		\$126,206,212	\$0	\$12,000,000	\$2,929,600	\$159,135,812





# 1994-1995 L.R.B.P. Requests



BY AGENCY AND PROJECT  
1994 - 1995 BIENNium

316

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
7.	Sandhouse, Rockvale		\$55,000		\$55,000
8.	Equipment Garage, Polson		\$190,000		\$190,000
9.	Equipment Garage, Saint Mary		\$82,500		\$82,500
10.	Sand Storage, Glendive		\$35,000		\$35,000
11.	Sandhouse, Reedpoint		\$55,000		\$55,000
12.	Section Headquarters, Troy		\$190,000		\$190,000
HIGHWAYS, DEPARTMENT OF SUBTOTAL			\$1,592,000		\$1,592,000
LABOR AND INDUSTRY, DEPARTMENT OF					
1.	Job Service Addition, Miles City			\$47,250	\$47,250
2.	Job Service Addition, Missoula			\$581,700	\$581,700
LABOR AND INDUSTRY, DEPARTMENT OF SUBTOTAL				\$628,950	\$628,950



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
LANDS, DEPARTMENT OF STATE						
1.	Initial Attack Station, Lima	\$15,000				\$15,000
2.	Vehicle Parking Shed, Helena	\$10,000				\$10,000
3.	Fire Training Center, Missoula	\$521,500				\$521,500
4.	Office Expansion, Kalispell Missoula	\$82,100				\$82,100
5.	Security Fence, Kalispell	\$10,000				\$10,000
6.	Office Expansion, Olney	\$40,500				\$40,500
7.	Vehicle Sheds, Kalispell, Libby and Swan	\$22,500				\$22,500
8.	Headquarters Building and Shop, Billings	\$329,000				\$329,000
9.	Vehicle Shed, Anaconda	\$4,800				\$4,800
10.	Bunkhouse, Lincoln	\$21,500				\$21,500
11.	Bunkhouse, Missoula	\$35,000				\$35,000
12.	Vehicle Shed, Missoula	\$4,800				\$4,800

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
13.	Replace Underground Storage Tanks, Anaconda and Clearwater	\$20,000			\$20,000
14.	Headquarters Addition, Missoula	\$5,500			\$5,500
LANDS, DEPARTMENT OF STATE SUBTOTAL		\$1,122,200			\$1,122,200
DEPARTMENT AND AGENCIES, SUBTOTAL		\$1,178,646	\$1,592,000	\$628,950	\$3,399,596
INSTITUTIONS, DEPARTMENT OF EASTMONT HUMAN SERVICES CENTER					
1.	Reroof Cottage I and II	\$50,000			\$50,000
2.	Install Underground Sprinkler System	\$24,000			\$24,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
3.	Enclose Walkway from Cottage III to Multipurpose Building	\$69,300			\$69,300
EASTMONT HUMAN SERVICES CENTER SUBTOTAL		\$143,300			\$143,300
MONTANA DEVELOPMENTAL CENTER					
1.	Reroof Cottages 16AB & 16C	\$127,155			\$127,155
2.	Reroof Building 102, Gymnasium	\$35,929			\$35,929
3.	Reroof Warehouse	\$108,140			\$108,140
4.	Replace Lawn Sprinklers	\$87,032			\$87,032
5.	Rip-rap River	\$9,945			\$9,945
MONTANA DEVELOPMENTAL CENTER SUBTOTAL		\$368,201			\$368,201

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
TOTAL					
INSTITUTIONS, DEPARTMENT OF SUBTOTAL		\$511,501			\$511,501
UNIVERSITY SYSTEM					
EASTERN MONTANA COLLEGE					
1.	Restroom Renovation, Cisel Hall	\$182,000			\$182,000
2.	Science Building Remodel	\$146,000			\$146,000
3.	Refinish Floors, P.E. Building	\$75,000			\$75,000
4.	Carpet Replacement, L.A. Building, McMullen Hall, Special Ed., Cisel Hall	\$100,000			\$100,000
5.	Remodel 1st & 3rd Floors, McMullen Hall	\$1,040,000			\$1,040,000



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
6.	Land Acquisition	\$2,000,000				\$2,000,000
EASTERN MONTANA COLLEGE						
	SUBTOTAL	\$3,543,000				\$3,543,000
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY						
1.	Renovate Museum Building	\$960,000				\$960,000
2.	Central Storage Building	\$132,000				\$132,000
3.	Campus Entrance and Parking Improvements	\$42,000				\$42,000
4.	Renovate Petroleum Building	\$960,000				\$960,000
5.	Library Addition Planning	\$100,000				\$100,000
6.	Property Acquisition	\$150,000				\$150,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
7.	Road Construction, BA&P Right-of-Way	\$288,000				\$288,000
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY SUBTOTAL						
		\$2,632,000				\$2,632,000
MONTANA BUREAU OF MINES						
1.	Bureau Building Planning	\$200,000				\$200,000
MONTANA BUREAU OF MINES SUBTOTAL						
		\$200,000				\$200,000
UNIVERSITY OF MONTANA						
1.	Mathematics Building	\$1,508,700				\$1,508,700
2.	University Hall Renovation	\$5,457,000				\$5,457,000
3.	Old Fine Arts Building Renovation Planning	\$107,000				\$107,000

# BUILDING PROGRAM REQUESTS

## BY AGENCY AND PROJECT 1994 - 1995 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
					TOTAL
4.	Rankin Hall Renovation Planning	\$107,000			\$107,000
5.	Asbestos Abatement, Campuswide, Phase III	\$535,000			\$535,000
6.	Major Maintenance and Renovation Projects, Campuswide	\$2,140,000			\$2,140,000
7.	Art Annex Interior Renovation	\$68,500			\$68,500
8.	Library Archives Shelving, Phase II	\$631,300			\$631,300
9.	Cloverbowl Renovation, Phase II	\$314,000			\$314,000
10.	Property Acquisition,	\$428,000			\$428,000
11.	Telecommunications Center Office Expansion	\$535,000			\$535,000
12.	Health and Physical Education Building	\$8,311,800			\$8,311,800

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
13.	Handicapped Access, Phase II	\$1,129,500				\$1,129,500
UNIVERSITY OF MONTANA						
SUBTOTAL		\$21,272,800				\$21,272,800
WESTERN MONTANA COLLEGE						
1.	Resurface PE Building Racquetball Courts	\$19,053				\$19,053
2.	Retaining Wall Repair, Campus Perimeter	\$39,364				\$39,364
WESTERN MONTANA COLLEGE						
SUBTOTAL		\$54,417				\$54,417
BILLINGS VOCATIONAL TECHNICAL CENTER						
1.	Install Well and Improve Sprinkler System	\$15,000				\$15,000

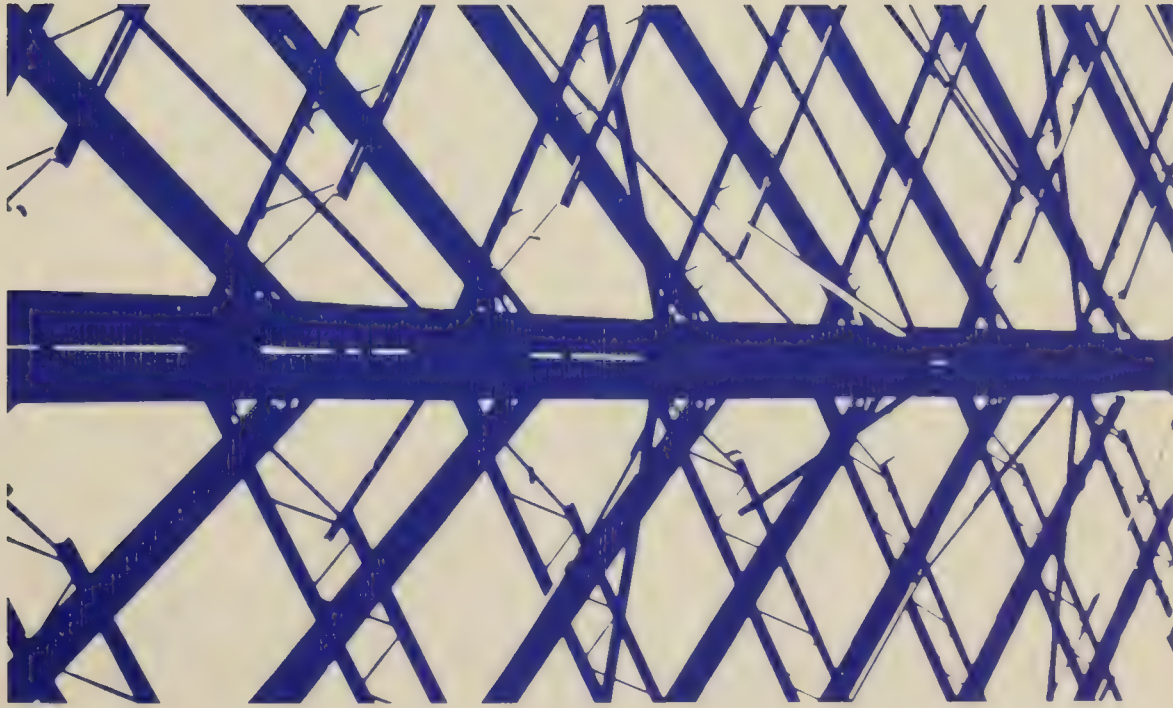


# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1994 - 1995 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.B.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
2.	Storage Building	\$40,000				\$40,000
3.	Tile and Carpet Installation	\$25,000				\$25,000
4.	Overhead Door Installation	\$15,000				\$15,000
5.	HVAC Control	\$20,000				\$20,000
BILLINGS VOCATIONAL TECHNICAL CENTER SUBTOTAL		\$115,000				\$115,000





# 1996-1997 L.R.B.P. Requests





# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
DEPARTMENTS AND AGENCIES					
FAMILY SERVICES					
1.	Lewis and Clark Lodge Demolition, PHS	\$26,250			\$26,250
2.	Air Condition Academic Building, PHS	\$31,500			\$31,500
FAMILY SERVICES					
SUBTOTAL		\$57,750			\$57,750

## HIGHWAYS, DEPARTMENT OF

1.	General Repair and Maintenance	\$500,000			\$500,000
2.	Sandhouse, Stanford	\$40,000			\$40,000
3.	Sandhouse, Roundup	\$40,000			\$40,000
4.	Equipment Garage, Clinton	\$79,375			\$79,375
5.	Equipment Building, Hot Springs	\$120,000			\$120,000

318

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	L.R.P.F.	FUNDING SOURCE			TOTAL
			State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
6.	Hardin Land Purchase		\$25,000			\$25,000
7.	Equipment Garage, Cricks Camp		\$65,000			\$65,000
8.	Project Managers Office, Great Falls		\$135,000			\$135,000
9.	Equipment Garage, Big Sandy		\$108,500			\$108,500
10.	Sandhouse , Loma		\$40,000			\$40,000
11.	Equipment Garage Addition, Malta		\$50,512			\$50,512
12.	Sandhouse, Saco		\$40,000			\$40,000
13.	Equipment Garage Addition, Boyes		\$39,000			\$39,000
14.	Sandhouse, Custer		\$45,000			\$45,000
15.	Equipment Garage Addition, Hillside		\$41,000			\$41,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
16.	Equipment Garage Addition, Culbertson		\$28,864		\$28,864
HIGHWAYS, DEPARTMENT OF					
SUBTOTAL			\$1,397,251		\$1,397,251
LABOR AND INDUSTRY, DEPARTMENT OF					
1.	Resurface Parking Lots, Statewide			\$25,000	\$25,000
2.	Handicapped Accessibility Modifications, Helena			\$72,100	\$72,100
LABOR AND INDUSTRY, DEPARTMENT OF					
SUBTOTAL				\$97,100	\$97,100
LANDS, DEPARTMENT OF STATE					
1.	Fire Cache, Libby	\$40,500			\$40,500
2.	Fire Cache, Clearwater	\$17,000			\$17,000
			320		

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	Air Condition Headquarters, Missoula	\$5,150				\$5,150
4.	Warehouse Expansion, Missoula	\$32,960				\$32,960
LANDS, DEPARTMENT OF STATE SUBTOTAL		\$95,610				\$95,610
DEPARTMENT AND AGENCIES, SUBTOTAL		\$153,360	\$1,397,251	\$97,100	\$0	\$1,647,711

INSTITUTIONS, DEPARTMENT OF  
EASTMONT HUMAN SERVICES CENTER

1. Install Foundation Drainage  
System, Cottage I
2. Replace Carpeting, Cottage I,  
II and Multipurpose Building



# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNium

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
UNIVERSITY SYSTEM						
EASTERN MONTANA COLLEGE						
1.	Science Building Remodel	\$278,000				\$278,000
2.	Land Acquisition	\$1,000,000				\$1,000,000
3.	Expansion and Remodel, Physical Education Building	\$2,080,000				\$2,080,000
4.	Tuck Pointing, McMullen Hall and Science Building	\$90,000				\$90,000
5.	Elevator Control Renovation, Liberal Arts Building	\$300,000				\$300,000
EASTERN MONTANA COLLEGE						
SUBTOTAL		\$3,748,000				\$3,748,000
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY						
1.	Renovate Main Hall, Phase I	\$260,000				\$260,000
2.	Library Addition	\$3,348,000				\$3,348,000
			</			

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE				TOTAL
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds	
3.	Property Acquisition	\$150,000				\$150,000
7.	Parking Lot Construction	\$347,000				\$347,000
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY SUBTOTAL		\$4,105,000				\$4,105,000
MONTANA BUREAU OF MINES						
1.	Bureau of Mines Building	\$5,500,000				\$5,500,000
MONTANA BUREAU OF MINES SUBTOTAL		\$5,500,000				\$5,500,000
UNIVERSITY OF MONTANA						
1.	Old Fine Arts Renovation	\$4,815,000				\$4,815,000
2.	Rankin Hall Renovation	\$1,391,000				\$1,391,000
3.	Forestry Renovation/Addition	\$3,745,000				\$3,745,000

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
TOTAL					
4.	Asbestos Abatement, Phase IV, Campuswide	\$642,000			\$642,000
5.	Major Maintenance and Renovation Projects, Campuswide	\$2,140,000			\$2,140,000
6.	Cloverbowl Renovation, Phase III	\$193,600			\$193,600
7.	Property Acquisition, Phase III	\$214,000			\$214,000
8.	Botany Renovations	\$917,000			\$917,000
9.	Basic Physics Lab Renovation	\$152,200			\$152,200
10.	Library Carpeting	\$577,800			\$577,800
11.	Parking Lot Rehabilitation	\$432,300			\$432,300
12.	Yellow Bay Fire House	\$107,000			\$107,000
UNIVERSITY OF MONTANA SUBTOTAL		\$15,326,900			\$15,326,900

# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNIIUM

Priority	Agency/Project	FUNDING SOURCE			TOTAL
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	
WESTERN MONTANA COLLEGE					
1.	Construct Vestibule on PE Classroom Building	\$10,700			\$10,700
2.	Construct Underground Sprinkler System	\$26,160			\$26,160
WESTERN MONTANA COLLEGE					
SUBTOTAL		\$36,860			\$36,860

## BILLINGS VOCATIONAL TECHNICAL CENTER

1.	Road and Parking Repairs	\$30,000			\$30,000
2.	Roofing Repairs, Phase II	\$20,000			\$20,000
3.	Signage	\$10,000			\$10,000
4.	Landscaping	\$10,000			\$10,000

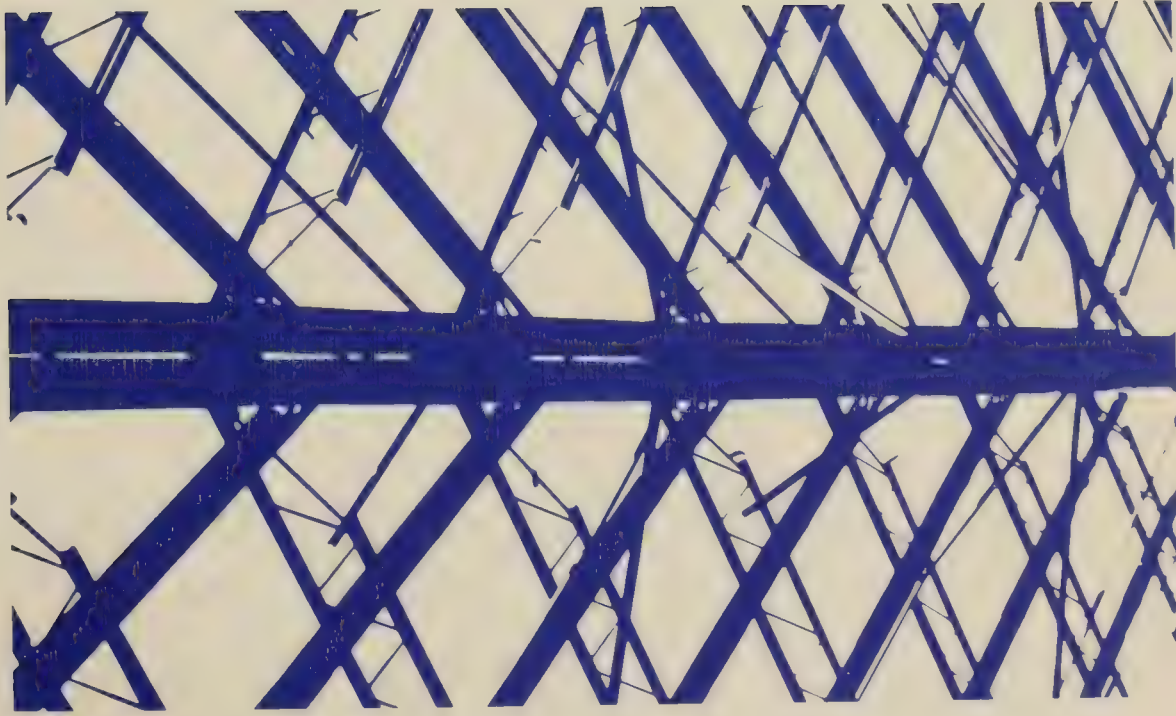


# BUILDING PROGRAM REQUESTS

BY AGENCY AND PROJECT  
1996 - 1997 BIENNium

Priority	Agency/Project	FUNDING SOURCE			
		L.R.P.F.	State Special Revenue Funds	Federal Special Revenue Funds	Other Funds
5.	Glass and Door Repairs	\$10,000			\$10,000
BILLINGS VOCATIONAL TECHNICAL CENTER SUBTOTAL		\$80,000			\$80,000
MISSOULA VOCATIONAL TECHNICAL CENTER					
1.	Install Water Well, Trade and Technology Complex	\$10,000			\$10,000
MISSOULA VOCATIONAL TECHNICAL CENTER SUBTOTAL		\$10,000			\$10,000





# Campus Plans





CAMPUS SITE PLANS  
INDEX

DEPARTMENT OF ADMINISTRATION

Capitol Complex

DEPARTMENT OF EDUCATION

School for the Deaf and Blind

DEPARTMENT OF FAMILY SERVICES

Mountain View School

Pine Hills School

DEPARTMENT OF INSTITUTIONS

Center for the Aged

Eastmont Human Services Center

Montana Developmental Center

Montana State Hospital-Galen Campus

Montana State Hospital-Warm Springs Campus

Montana State Prison

Montana Veterans' Home

Swan River Forest Camp

MONTANA UNIVERSITY SYSTEM

Eastern Montana College

Montana College of Mineral Science & Technology

Montana State University

Northern Montana College

University of Montana

Western Montana College



# LEGEND

- MONTANA STATE  
CAPITOL COMPLEX
- 1 Executive Residence
  - 2 Cogswell Building
  - 3 Labor & Industry Building
  - 4 Old Board of Health Building
  - 5 SRS Building
  - 6 Mitchell Building
  - 7 Old Livestock Building
  - 8 Capitol Annex
  - 9 Boiler Plant
  - 10 State Capitol
  - 11 Montana Historical Society, Museum
  - 12 Justice Building & Montana State Library
  - 13 Department of Natural Resources & Conservation Building
  - 14 Institutions Building
  - 15 Teachers Retirement Building
  - 16 Department of Fish, Wildlife & Parks Building
  - 17 1410 1412 8th Avenue
  - 18 Commerce Building
  - 19 State Motor Pool
  - 20 Scott Hart Building
  - 21 1206 6th Avenue
  - 22 1218 6th Avenue
  - 23 1246 Washington Drive
  - 24 1244 8th Avenue
  - 25 1219 8th Avenue
  - 26 1215 8th Avenue
  - 27 1209 8th Avenue
  - 28 1205 8th Avenue
  - 29 1300 11th Avenue
  - 30 1400 8th Avenue
  - 31 1404 8th Avenue



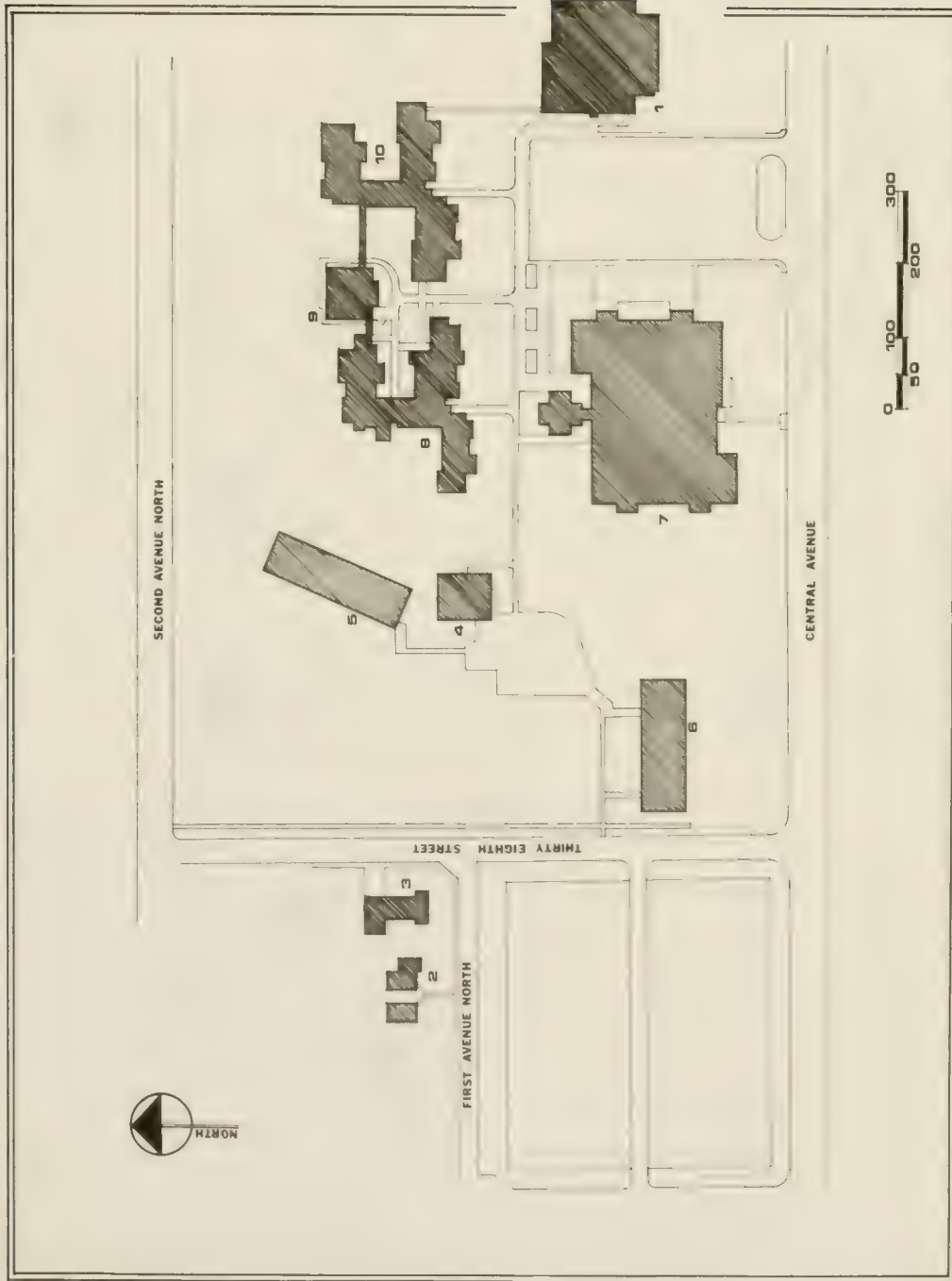




# LEGEND

SCHOOL FOR THE DEAF  
AND BLIND

- 1 P E Complex
- 2 Residence
- 3 Superintendent's Residence
- 4 Boiler House
- 5 Classroom Building
- 6 Vocational Shop
- 7 Administration School Building
- 8 Dormitory
- 9 Food Service
- 10 Dormitory



## SCHOOL FOR THE DEAF AND BLIND

GREAT FALLS MONTANA



# LEGEND

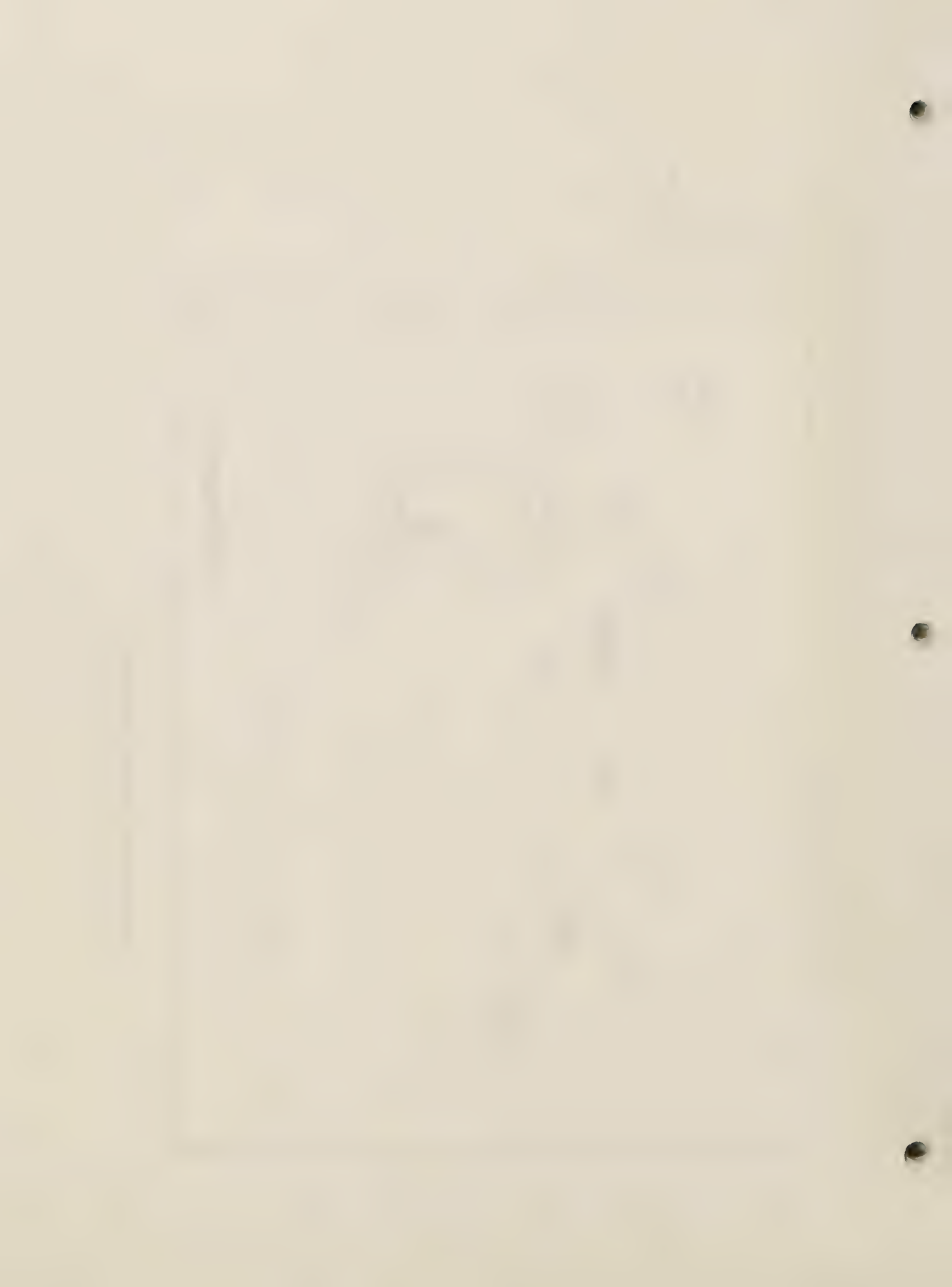
## MOUNTAIN VIEW SCHOOL

- 1 Spruce
- 2 Aspen
- 3 Shop
- 4 Gymnasium
- 5 Kitchen Dining
- 6 School
- 7 Garage
- 8 Clinic
- 9 Maple Administration
- 10 Cottonwood
- 11 Sewage Lift Station
- 12 Pump House
- 13 Water Tower



## MOUNTAIN VIEW SCHOOL

HELENA MONTANA

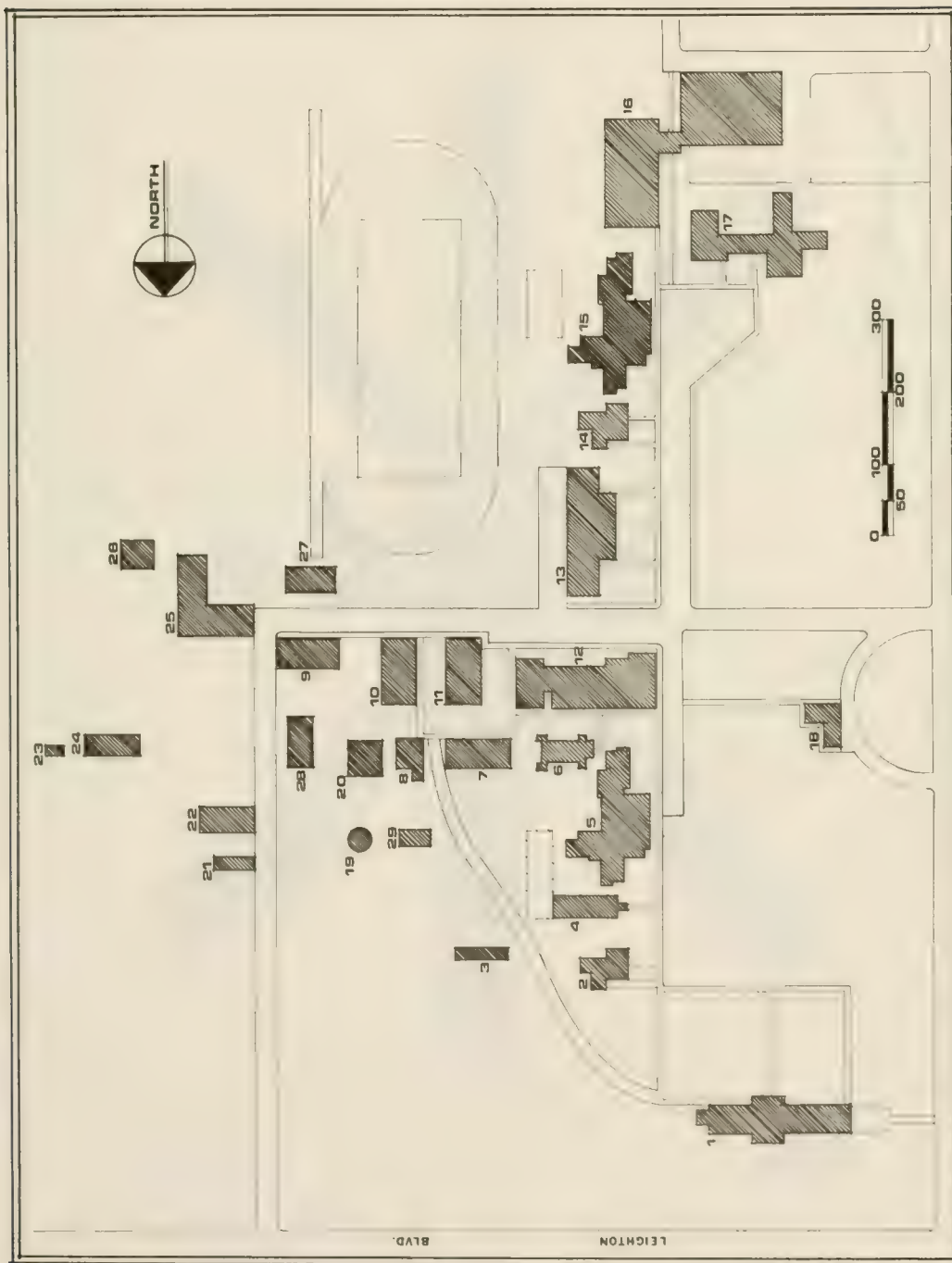




# LEGEND

## PINE HILLS SCHOOL

- 1 Custer Lodge
- 2 Crazy Horse Lodge
- 3 Lumber Storage
- 4 Lewis & Clark Lodge
- 5 Sundance Lodge
- 6 Chapel
- 7 Main Canteen
- 8 Boiler House
- 9 Farm Shop
- 10 E and P Shop
- 11 Store
- 12 Administration
- 13 Vocational Education
- 14 Joseph Lodge
- 15 Range Rider Lodge
- 16 School/Gym
- 17 Russell Lodge
- 18 Staff Residence
- 19 Water Tower
- 20 Slaughter House & Granary
- 21 Greenhouse
- 22 Chicken House
- 23 Bull Barn
- 24 Loafing Shed
- 25 Dairy Barn
- 26 Old Root Cellar Abandoned
- 27 Parking Shed
- 28 Root Cellar
- 29 Old Electric - Plumbing Shop



## PINE HILLS SCHOOL

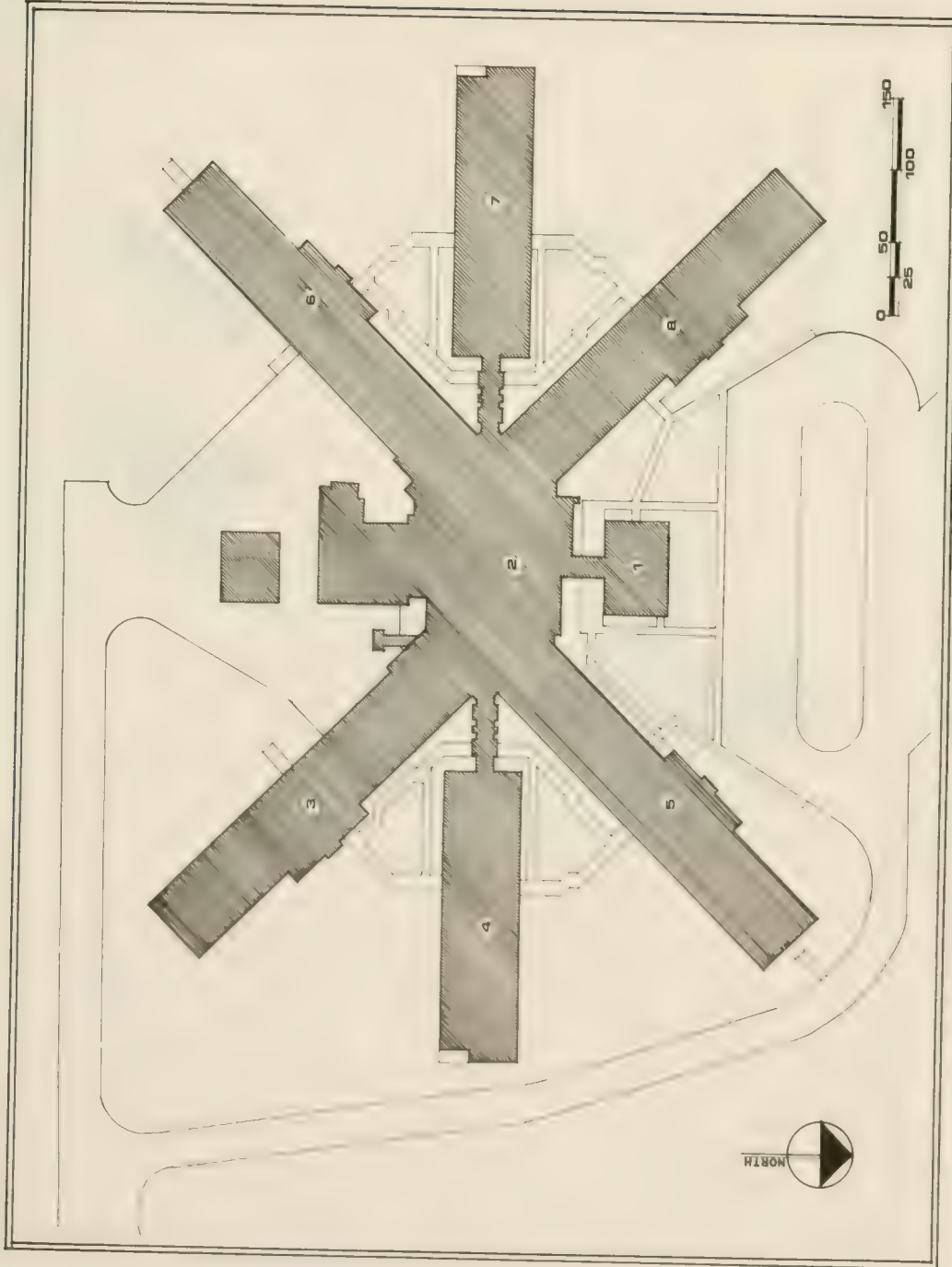
MILES CITY MONTANA



**LEGEND**

CENTER FOR THE AGED

- 1 Wing H
- 2 Wing C
- 3 Wing E
- 4 Wing F
- 5 Wing D
- 6 Wing B
- 7 Wing G
- 8 Wing A



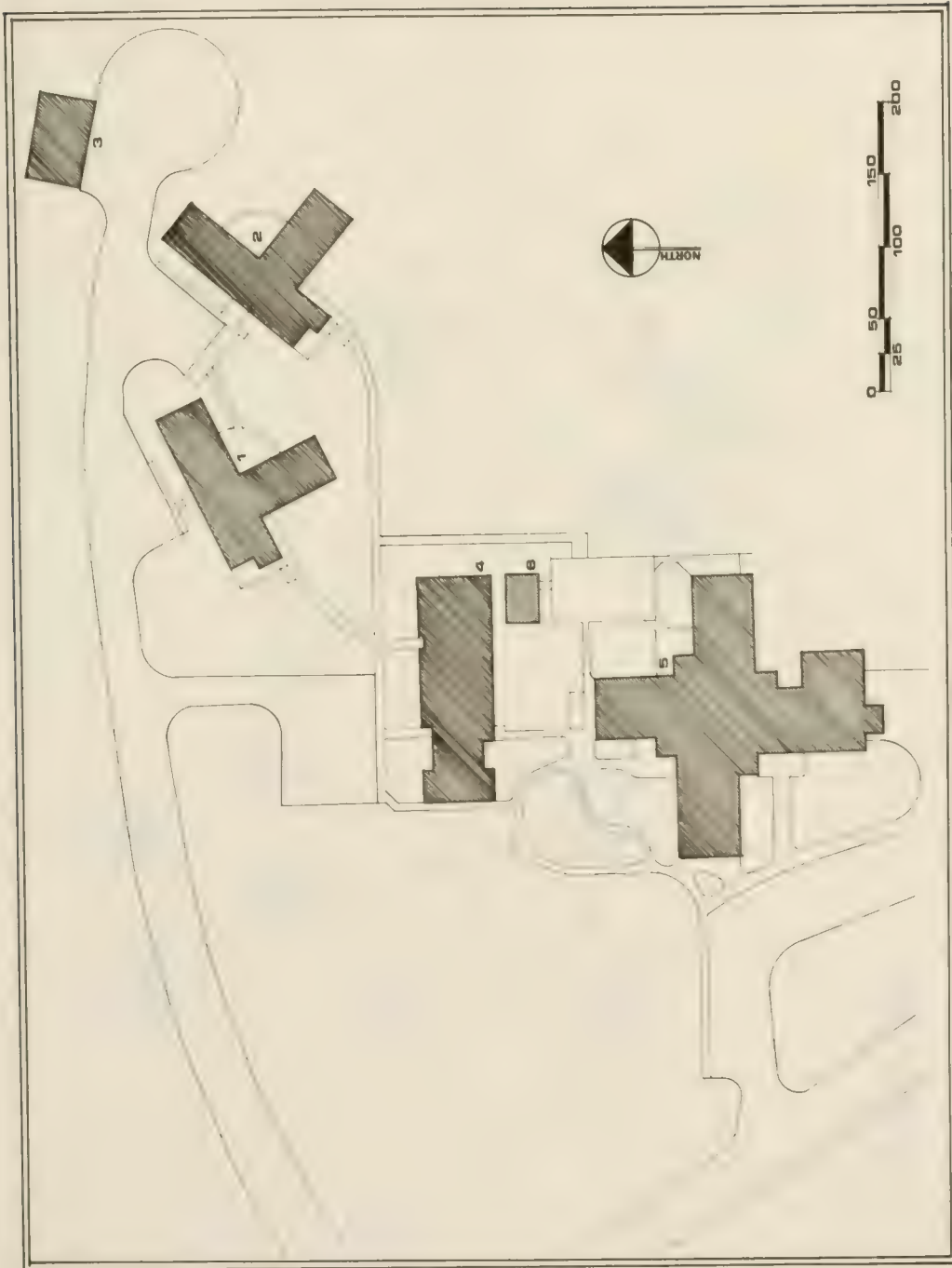
**CENTER FOR THE AGED**  
LEWISTOWN MONTANA





**LEGEND**  
**EASTMONT HUMAN SERVICES**  
**CENTER**

- 1 Administration Cottage I
- 2 Cottage II
- 3 Shop
- 4 Multi-Purpose Building
- 5 Cottage III
- 6 Storage Shed



**EASTMONT HUMAN SERVICES CENTER**

**GLENDIVE**      **MONTANA**

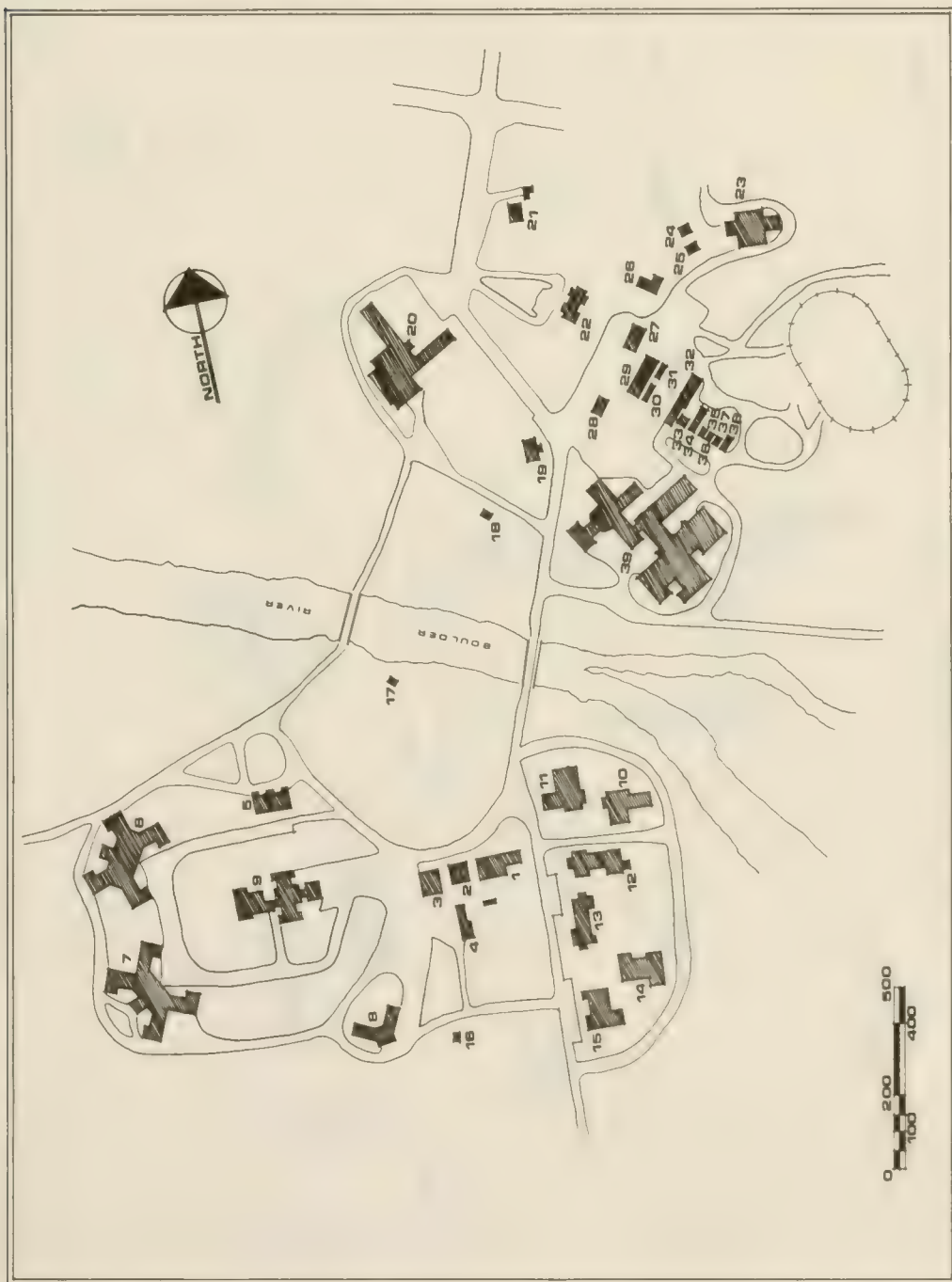


# LEGEND

## MONTANA

### DEVELOPMENTAL CENTER

- 1 Power House (44)
- 2 Old Laundry - Storage (23)
- 3 Laundry (24)
- 4 Cottage Storage (69)
- 5 Storage (5)
- 6 Life Skills & Education Center
- 7 Life Skills & Education Center
- 8 Treatment Services (8)
- 9 Kitchen/Dining Facility (9 & 25)
- 10 Resident Cottage (10)
- 11 Resident Cottage (11)
- 12 Resident Cottage (12)
- 13 Resident Cottage (13)
- 14 Resident Cottage (14)
- 15 Resident Cottage (15)
- 16 Pumphouse 3(47)
- 17 Pumphouse 1(42)
- 18 Pumphouse 2(43)
- 19 Intensive Training Unit (55)
- 20 Administration Building/Gym (102)
- 21 Intensive Training Unit (50)
- 22 Old Administration Building (100)
- 23 Receiving Warehouse (20)
- 24 Warehouse Storage (20A)
- 25 Warehouse Storage (20B)
- 26 Carpenter Shop Glass Room Upholstery & Sewing Room (21)
- 27 Freezer Cold Storage Milk Storage Appliance Repair (22)
- 28 General Storage (56 & 33)
- 29 Shop (30)
- 30 Grease Quonset (31)
- 31 Wash Room Quonset (32)
- 32 Garages (34)
- 33 Barrel Room (36)
- 34 Cat Shed (37)
- 35 Lawn Equipment Storage (38)
- 36 Storage (39)
- 37 Storage (40)
- 38 Plumber Equipment Quonset (41)
- 39 Building 104, Multi-User, Residential/Medical Services



## MONTANA DEVELOPMENTAL CENTER

BOULDER MONTANA

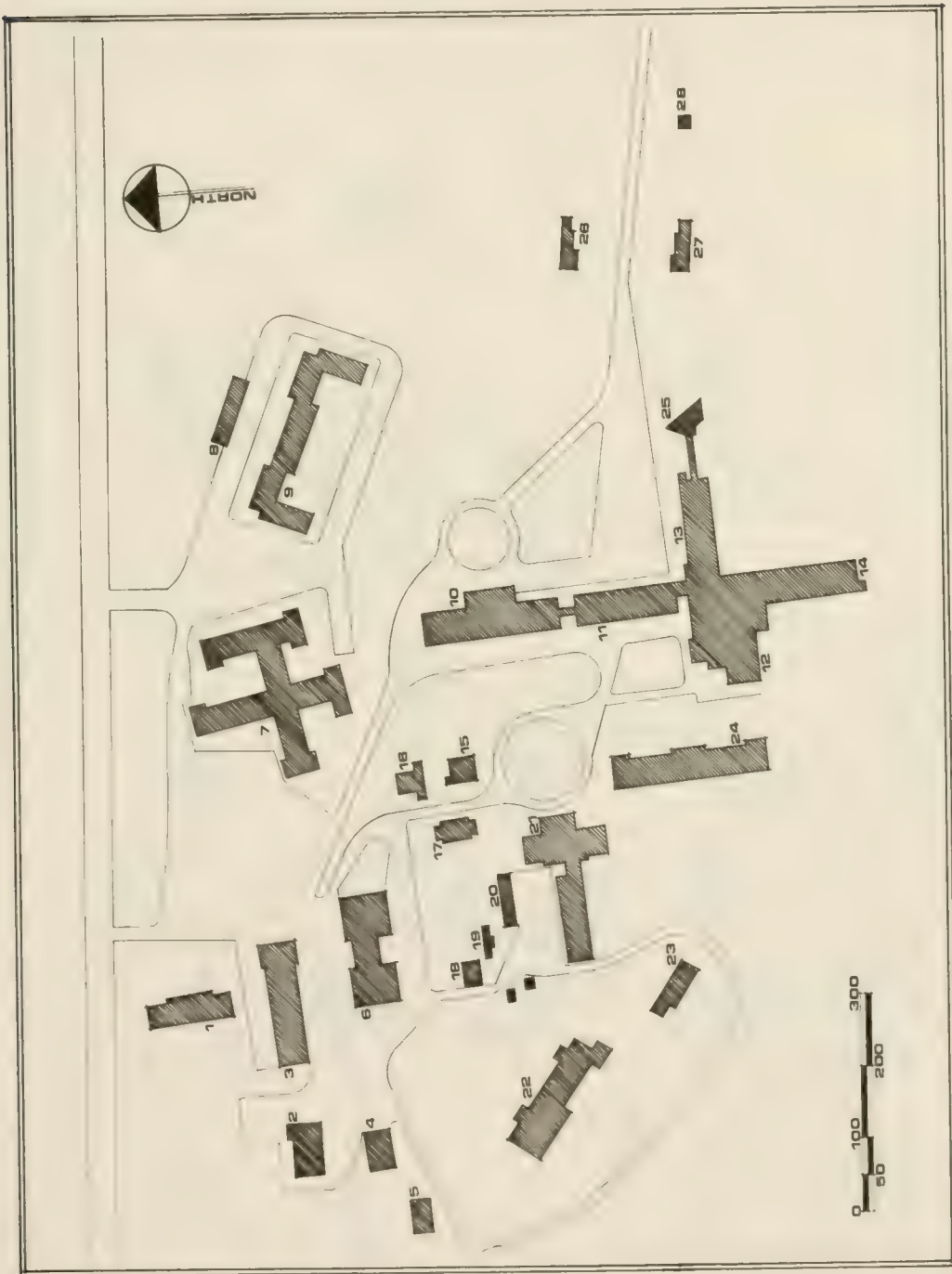




# LEGEND

MONTANA STATE HOSPITAL  
GALEN CAMPUS

- 1 Triplex
- 2 Warehouse
- 3 Main Garage
- 4 Paint Shop
- 5 Root Cellar
- 6 Maintenance Shops
- 7 Alcohol Treatment & Rehabilitation Center
- 8 Employee's Apartments
- 9 Receiving Hospital
- 10 Annex
- 11 Cafeteria
- 12 Terrill Wing
- 13 Crockett Wing
- 15 Superintendent's Residence
- 16 Cottage 3
- 17 Cottage 4
- 18 Cottage 5
- 19 Greenhouse
- 20 Garages
- 21 Gym Employee Apartments
- 22 Old Lighthouse
- 23 Lighthouse
- 24 Byrum Hall
- 25 Chapel
- 26 Cottage 2
- 27 Cottage 1
- 28 Pump House



MONTANA STATE HOSPITAL

GALEN

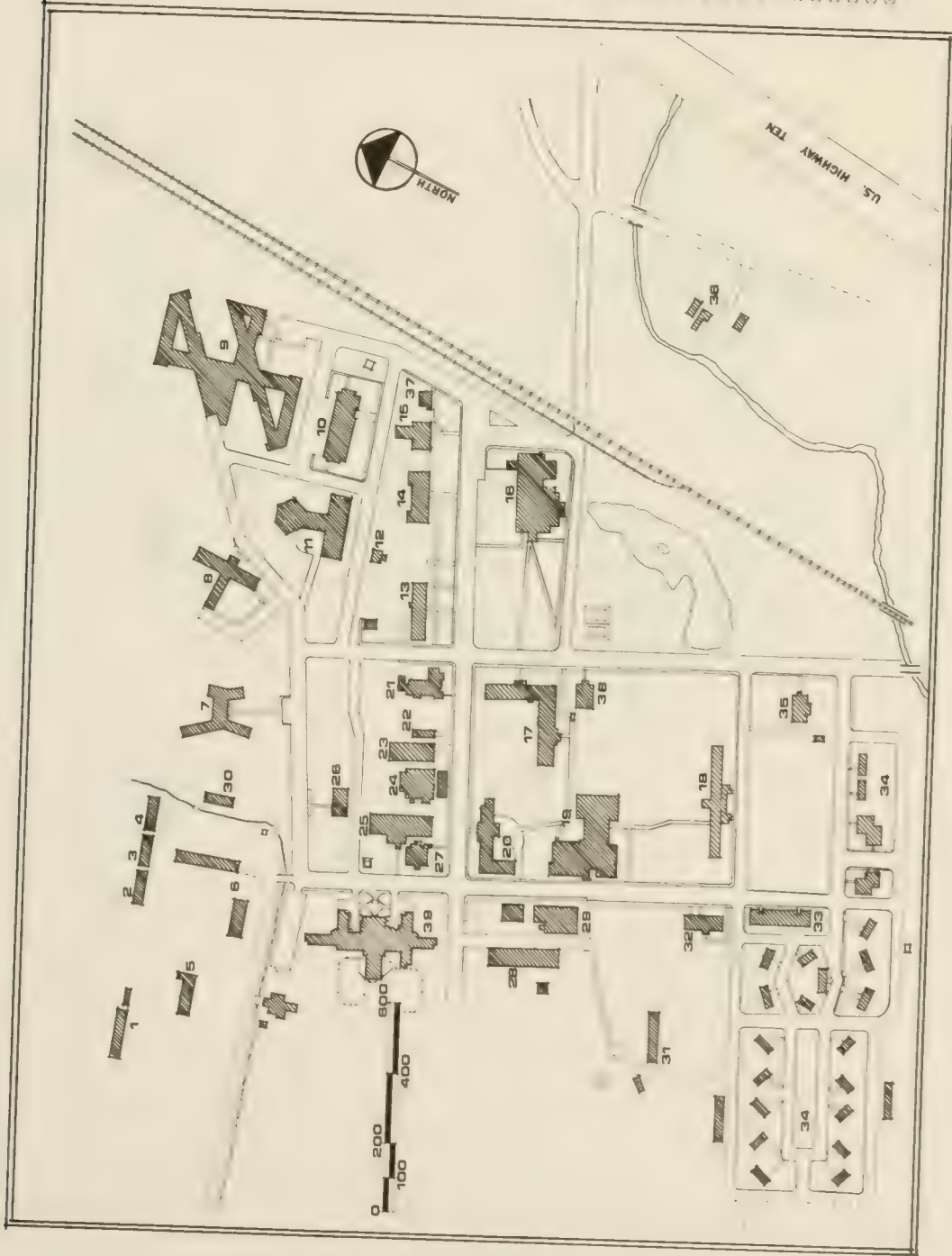
MONTANA



# LEGEND

MONTANA STATE HOSPITAL  
WARM SPRINGS CAMPUS

- 1 Warehouse (414)
- 2 Plumbing Shop (405)
- 3 Maintenance Office/Shops (404)
- 4 Paint Shop (403)
- 5 Lumber Storage (406)
- 6 Storage (401)
- 7 Vacant (218)
- 8 Pintlar Lodge (546)
- 9 Receiving Hospital (201)
- 10 Intake Unit (217)
- 11 Spratt Building (219)
- 12 Telephone Switch Room (103)
- 13 Old General Hospital Storage (205)
- 14 Administrative Annex (113)
- 15 Administration (101)
- 16 Multi-Purpose Building (102)
- 17 Bolton (210)
- 18 Children's Unit (211)
- 19 Kitchen & Food Service (301)
- 20 Warren (207)
- 21 Residence (501)
- 22 Fire Station (104)
- 23 Main Garage (105)
- 24 Trade School and Mechanical Repair (106)
- 25 Laundry (108)
- 26 Boiler Plant (107)
- 27 Linen Supply (109)
- 28 Receiving Warehouse (305)
- 29 Commissary (304)
- 30 Carpentry Shop
- 31 Greenhouse (407)
- 32 Unit 85 86 (216)
- 33 Women's Correctional Facility (110)
- 34 Staff Housing (534)
- 35 Residence (505)
- 36 Residence (510)
- 37 Post Office (100)
- 38 Scanland Apartments (502)
- 39 Forensic Treatment Facility (206)



MONTANA STATE HOSPITAL  
WARM SPRINGS MONTANA

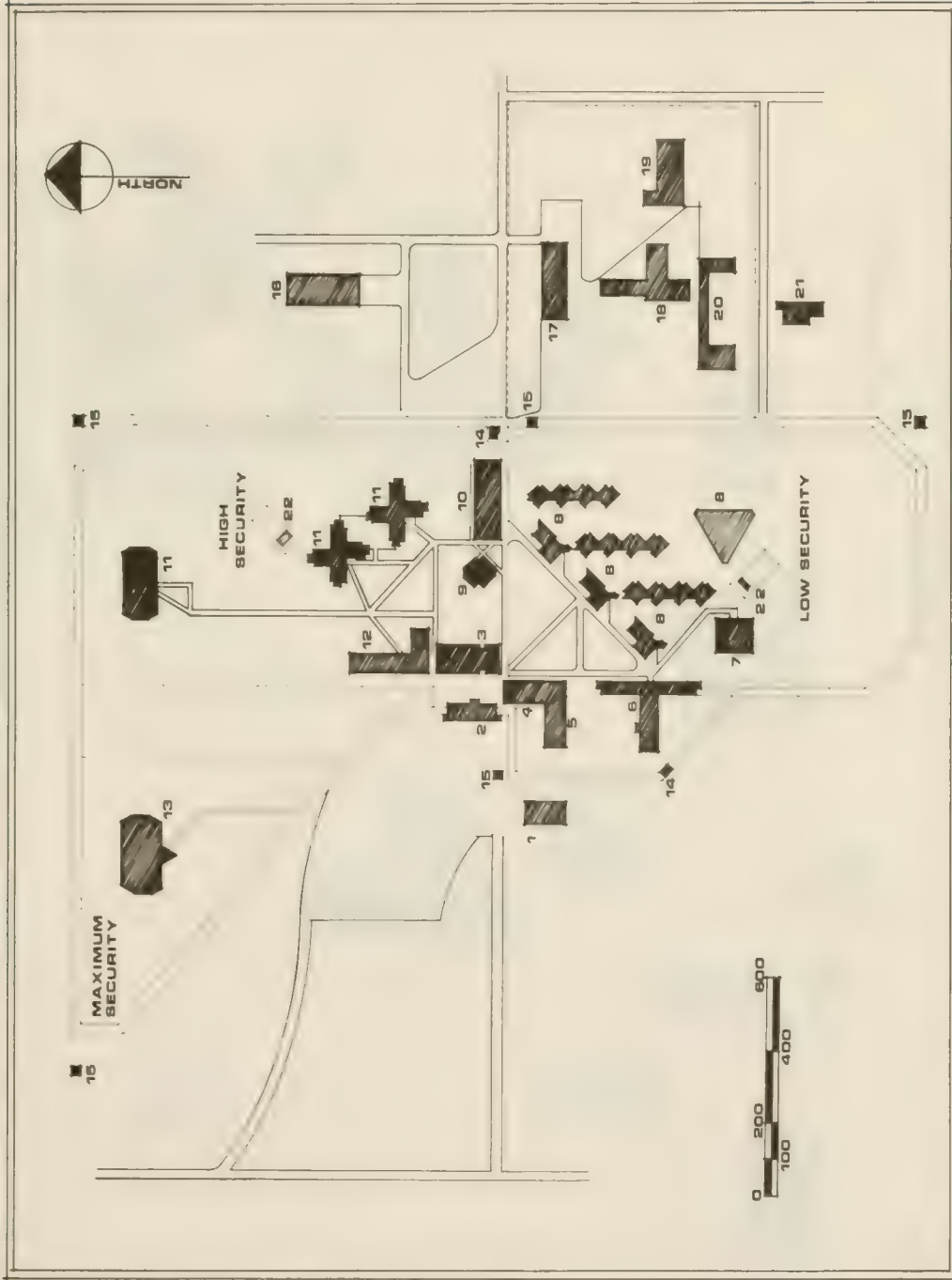




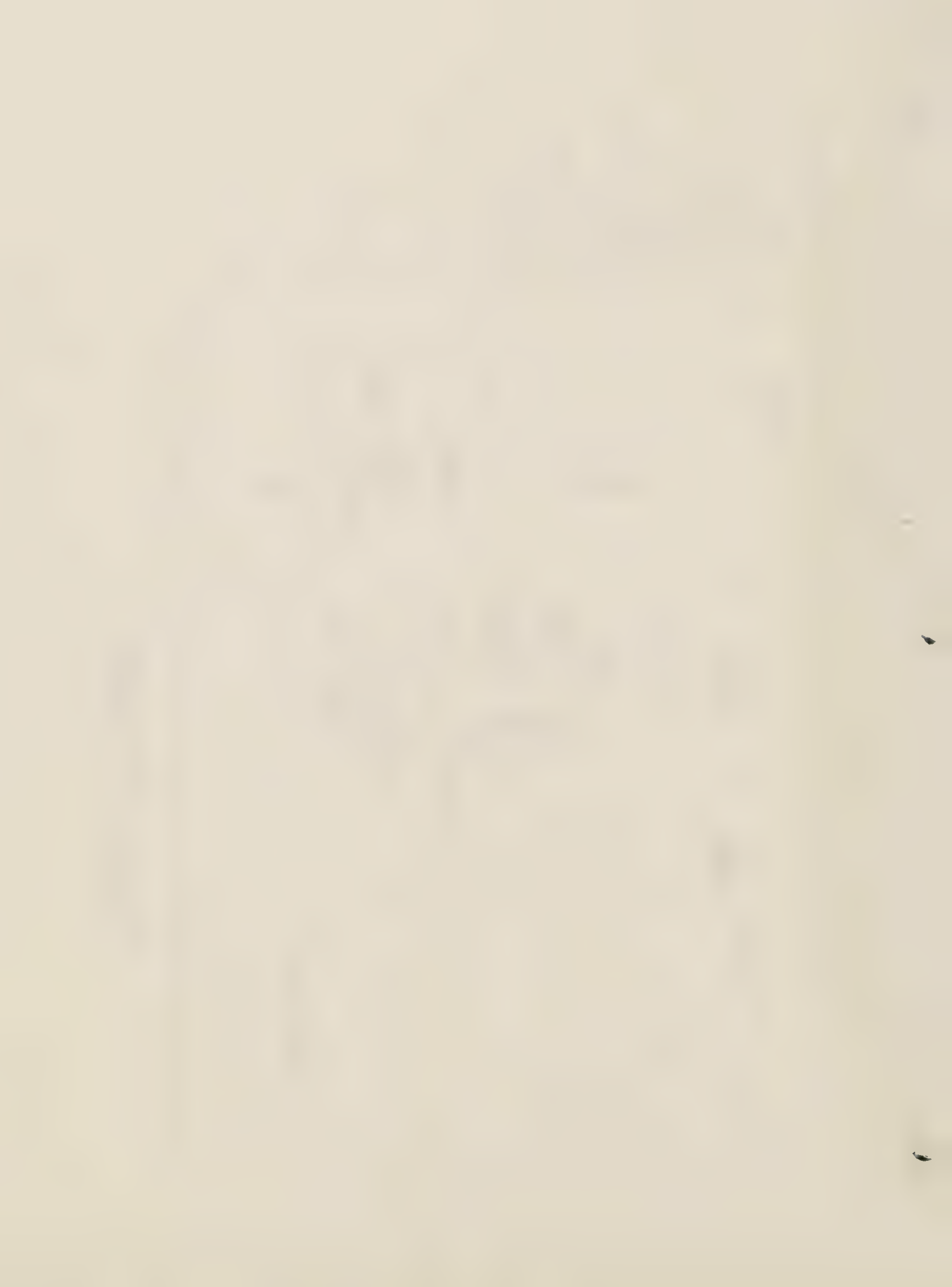
# LEGEND

## MONTANA STATE PRISON

- 1 Infirmary (Proposed Business Office)
- 2 Administration Building
- 3 Gym
- 4 Receiving Maximum Security Medical Addition
- 5 Low Security Support Building
- 6 Low Security Gym
- 7 Low Security Housing
- 8 Chapel
- 9 Kitchen/Dining Facility
- 10 High Security Housing
- 11 High Security Support Building
- 12 Maximum Security Housing
- 13 Guard Station
- 14 Warehouse
- 15 Vocation Industry Building
- 16 Industries Manufacturing
- 17 Tag Plant
- 18 Maintenance Shops
- 19 Farm Machinery Repair Facility
- 20 Yard Storage



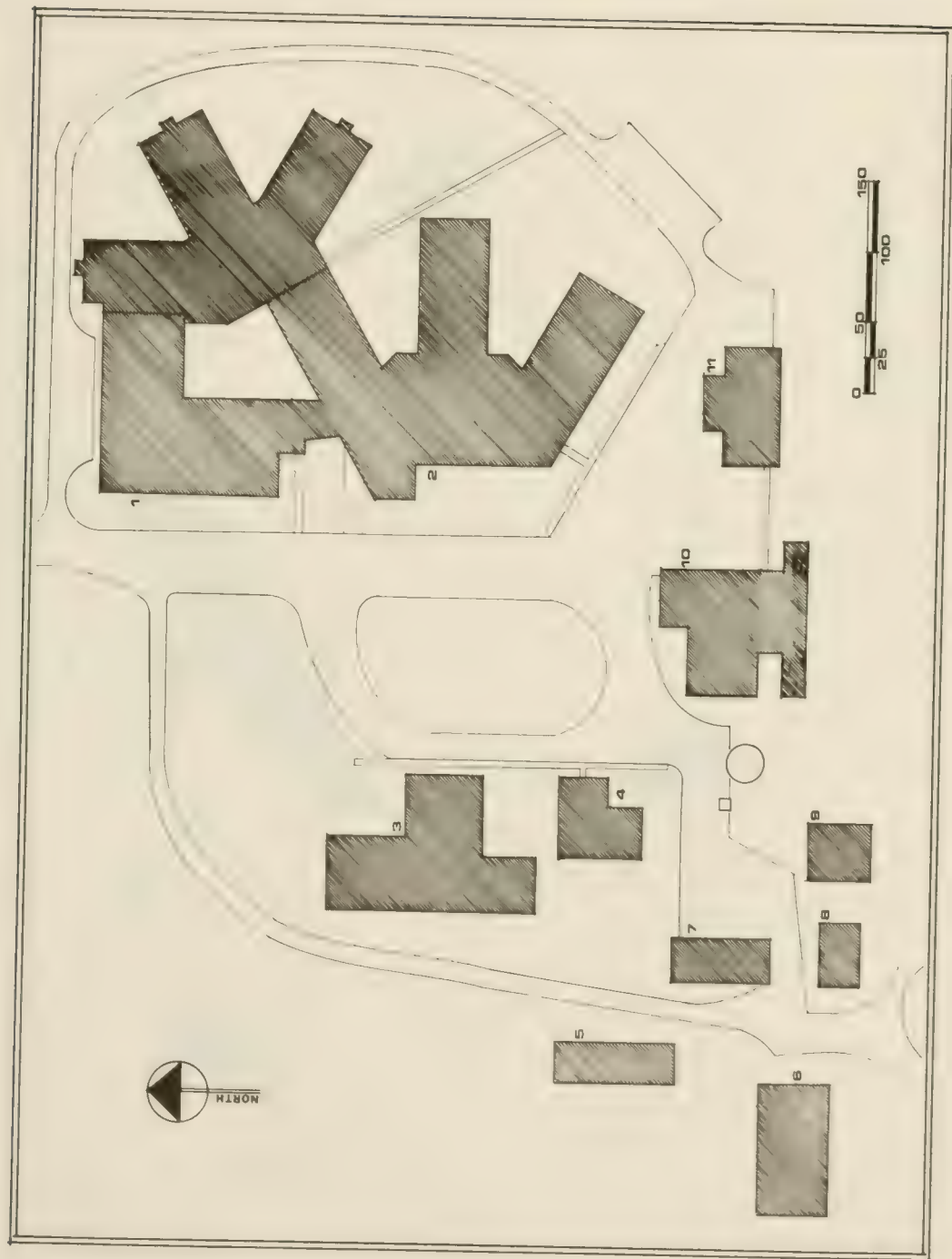
**MONTANA STATE PRISON**  
DEER LODGE MONTANA



# LEGEND

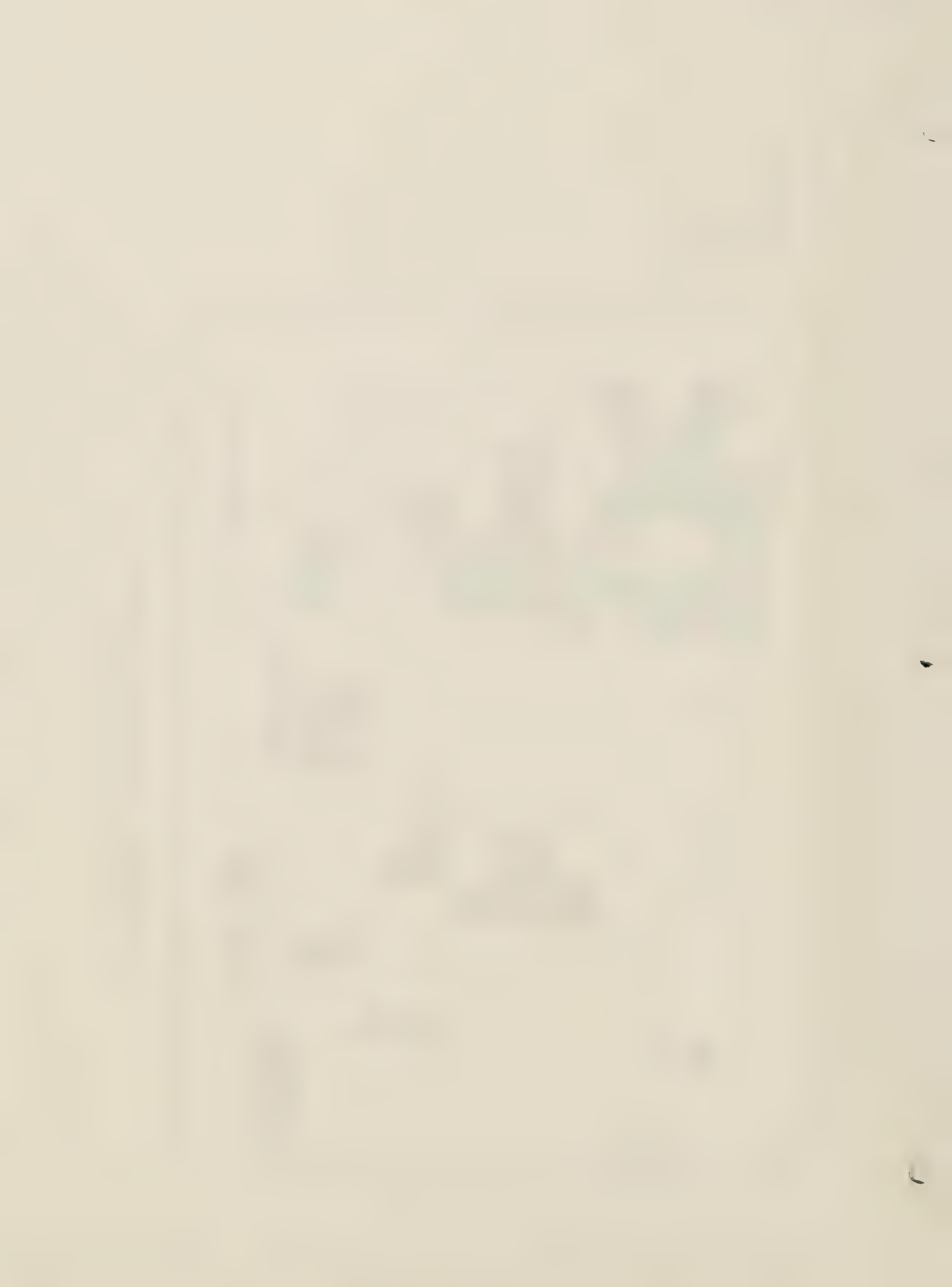
## MONTANA VETERANS HOME

- 1 Nursing Home Addition
- 2 Domiciliary Office Building
- 3 Old Domiciliary
- 4 Residence
- 5 Shop
- 6 Plumbing Shop
- 7 Utility Shop
- 8 Carpentry Shop
- 9 Boiler House
- 10 Old Main
- 11 Chapel



## MONTANA VETERANS HOME

COLUMBIA FALLS MONTANA

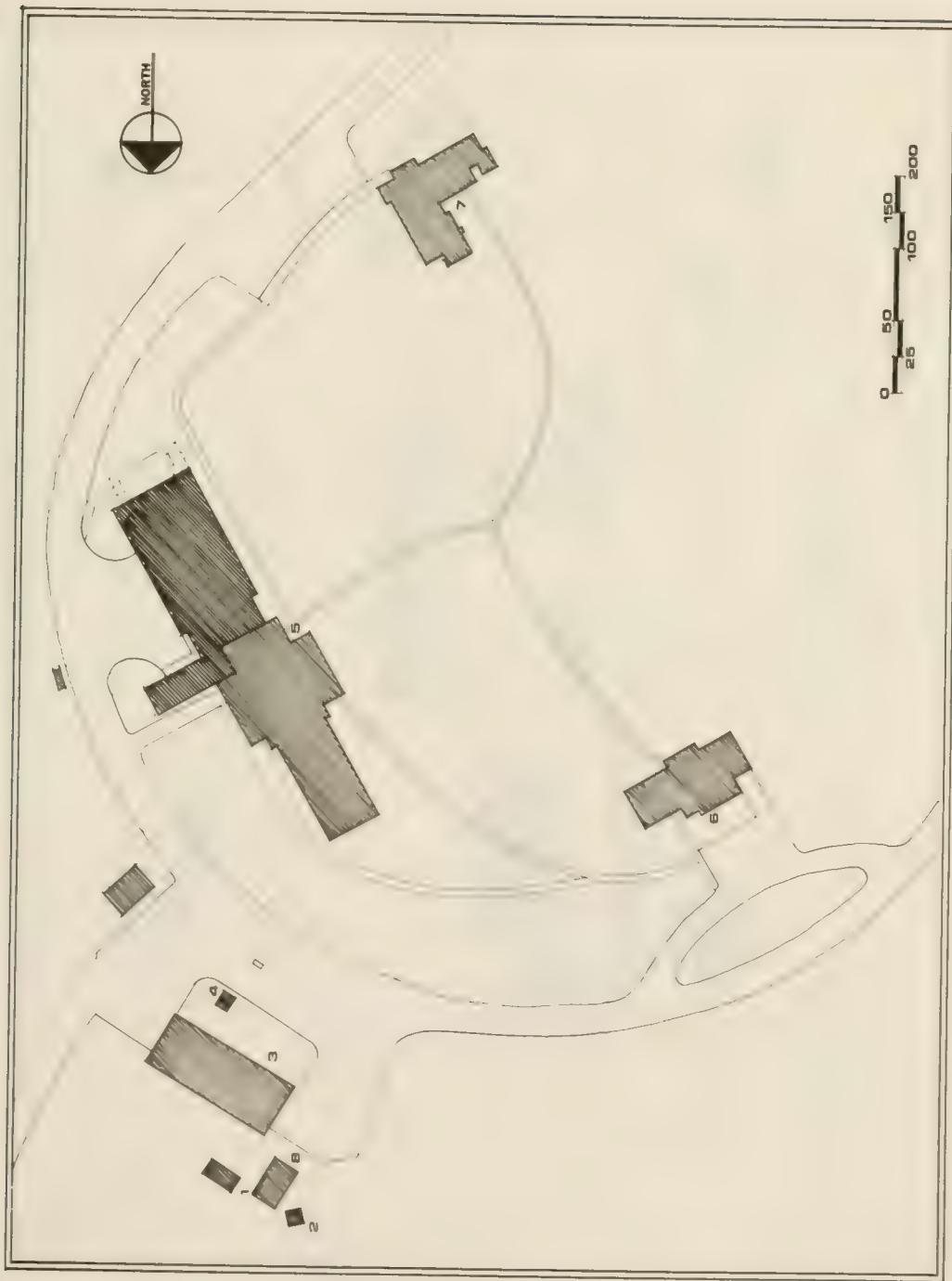




# LEGEND

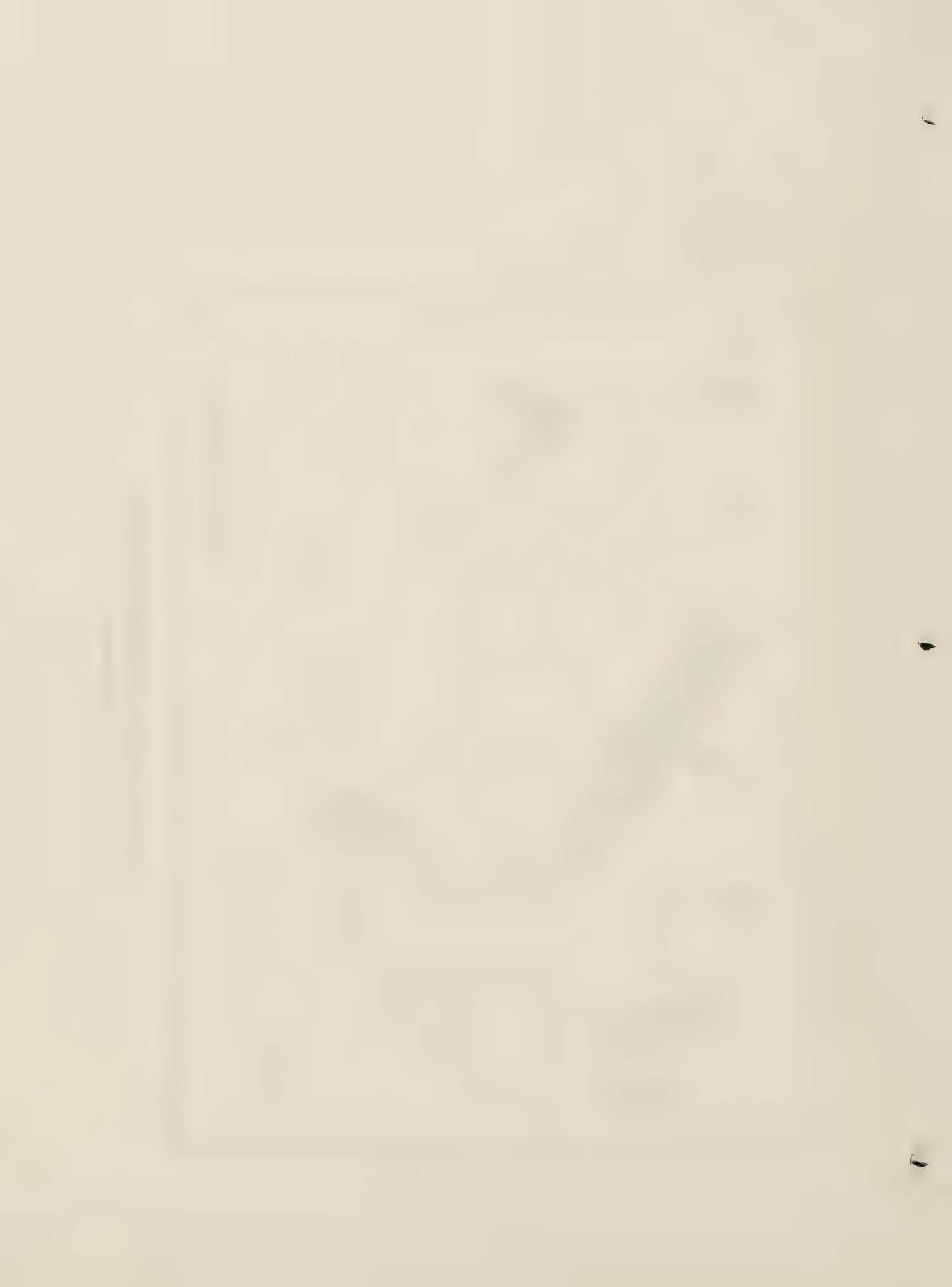
## SWAN RIVER FOREST CAMP

- 1 Emergency Generator
- 2 Well House
- 3 Mechanical Shop
- 4 Gas House (Pump)
- 5 Lodge/Gym
- 6 Food Service
- 7 Administration Building
- 8 Storage Building
- 9 Wood Shed



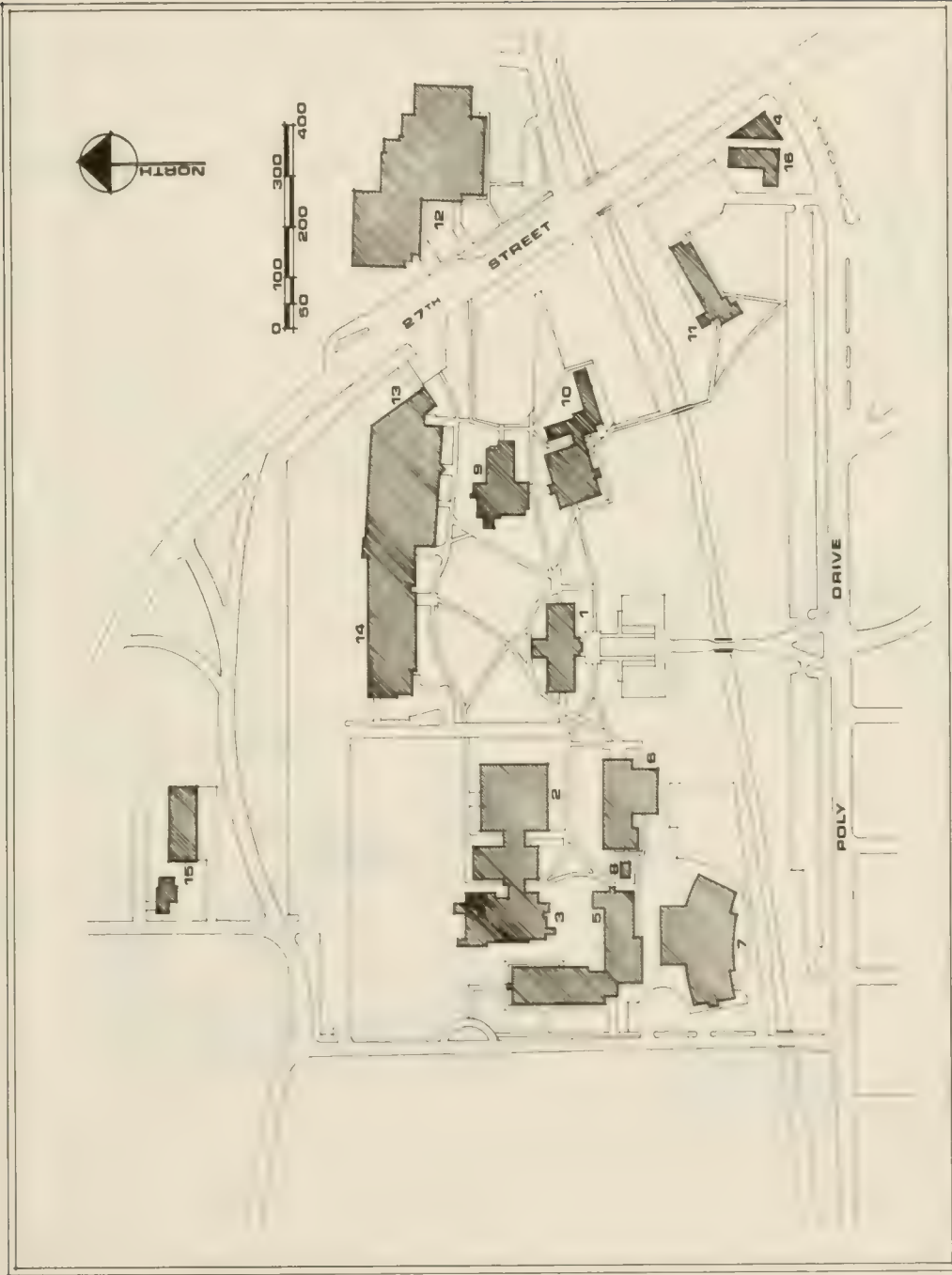
## SWAN RIVER FOREST CAMP

SWAN LAKE MONTANA

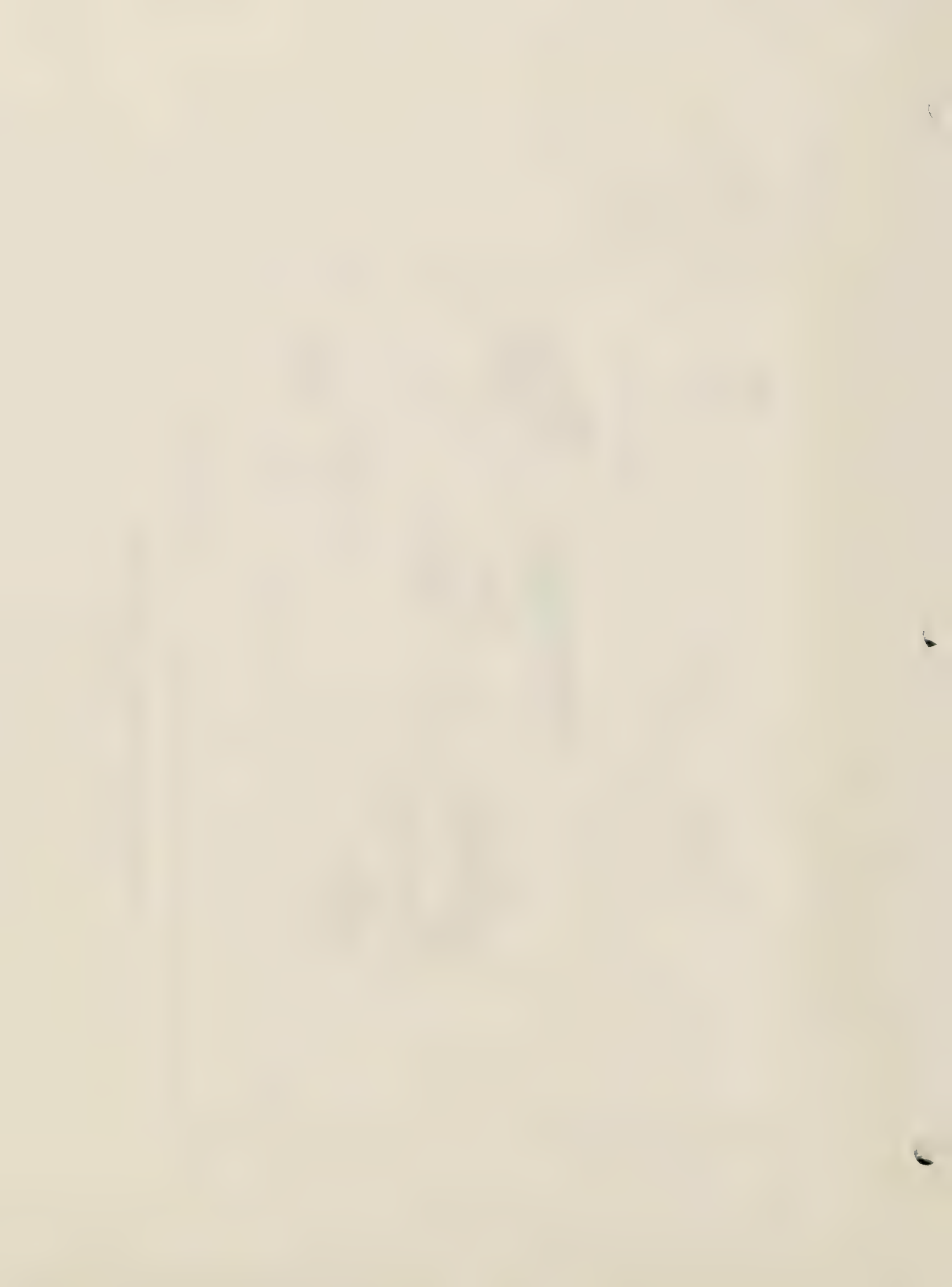


# **LEGEND** EASTERN MONTANA COLLEGE

- 1 McMullen Hall
- 2 Library
- 3 Liberal Arts Building
- 4 Poly Building
- 5 Education Building
- 6 Science Building
- 7 Special Education Building
- 8 Greenhouse
- 9 Computer Annex
- 10 Cisel Hall
- 11 Apsaruke Hall
- 12 P E Building
- 13 Student Union
- 14 Building Rimrock Hall
- 15 Petro Hall
- 16 Physical Plant
- 17 Art Annex



**EASTERN MONTANA COLLEGE**  
BILLINGS MONTANA

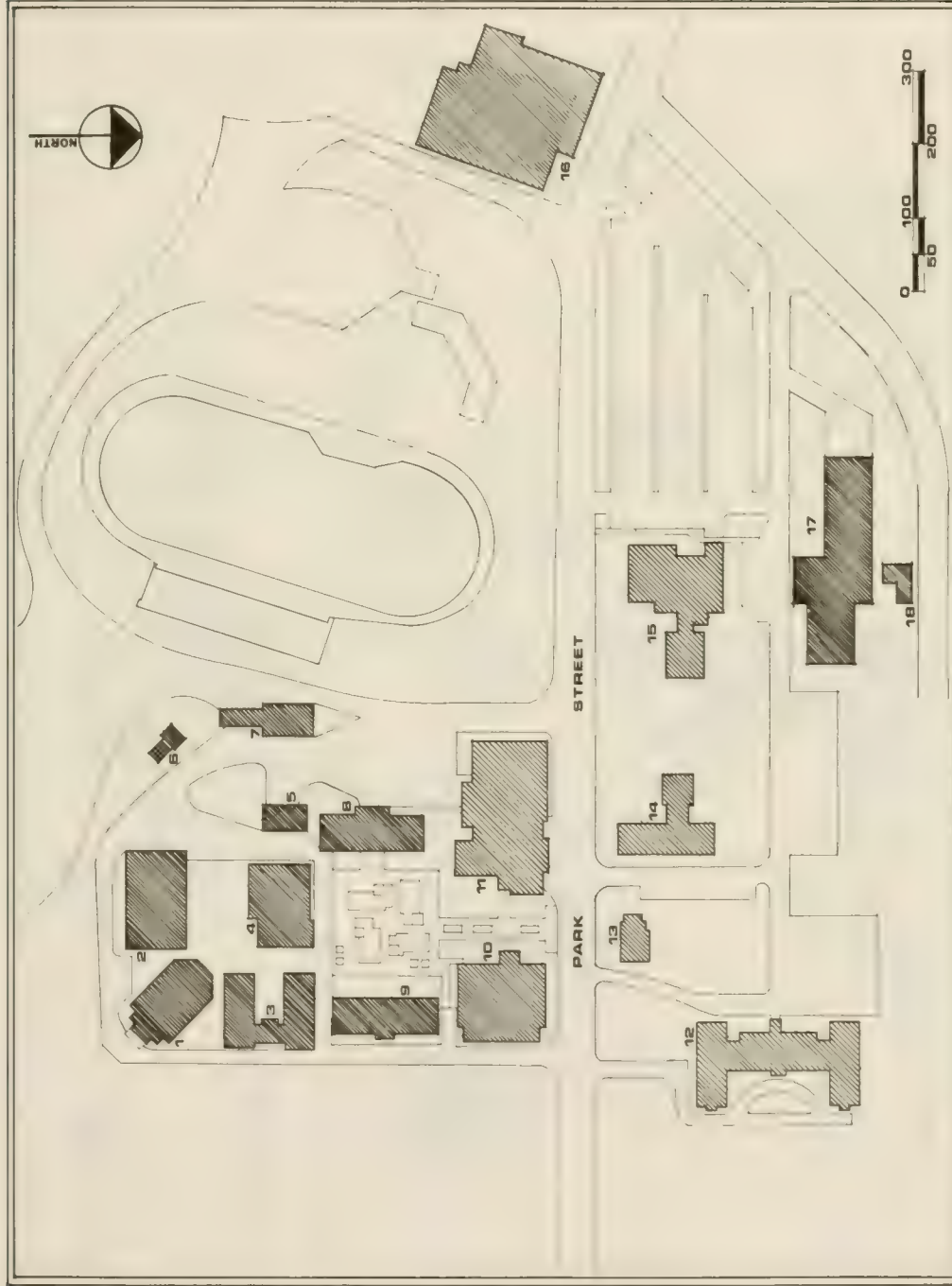




# LEGEND

## MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY

- 1 Museum
- 2 Metallurgy
- 3 Main Hall
- 4 Mill Building
- 5 Shop
- 6 Greenhouse
- 7 Boiler Plant
- 8 Petroleum
- 9 Engineering
- 10 Science/Engineering Building
- 11 Student Union Building
- 12 Prospector Hall (Dorm)
- 13 President's House
- 14 Mining/Geology Building
- 15 Library/Auditorium
- 16 H P E R
- 17 Engineering Laboratory
- 18 Classroom Building
- 19 Foundation Office



## MONTANA COLLEGE OF MINERAL SCIENCE & TECHNOLOGY

BUTTE MONTANA



# LEGEND

## MONTANA STATE UNIVERSITY

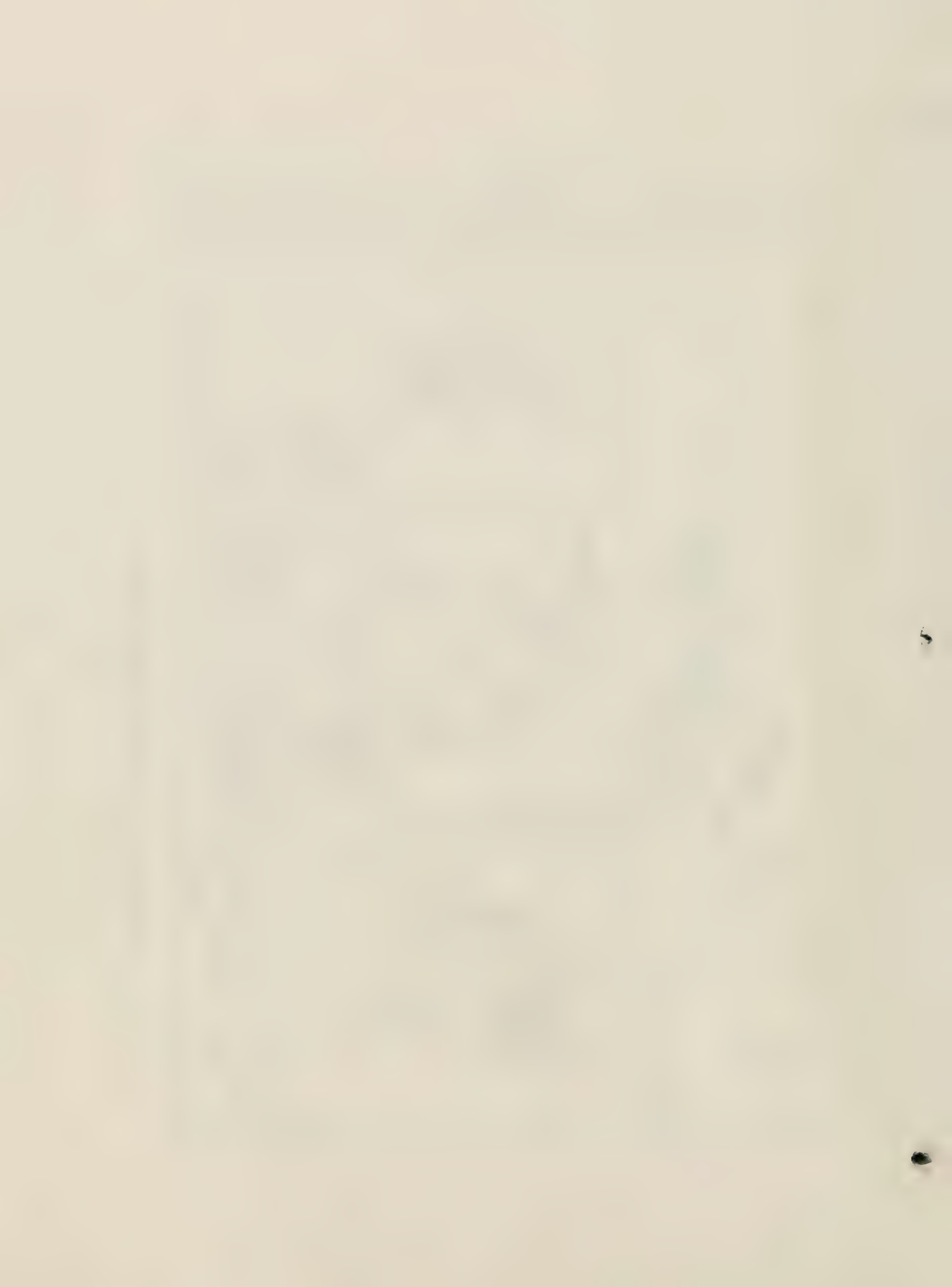
- 1 Roskie Hall
- 2 Hedges South
- 3 Hedges Food Center
- 4 Hedges North
- 5 McCall Hall
- 6 Howard Hall
- 7 Cheever Hall
- 8 Haynes Hall
- 9 Visual Communications
- 10 Plant Growth Center
- 11 Sherrick Hall
- 12 Cooley Lab/Lewis Hall
- 13 Taylor Hall
- 14 Linfield Hall
- 15 Gaines Hall
- 16 Traphagen Hall
- 17 Reid Hall
- 18 Johnson Lecture Hall
- 19 Leon Johnson Hall
- 20 Romney Gym
- 21 Reare Library
- 22 Montana Hall
- 23 AJM Johnson Hall
- 24 Stand Student Union
- 25 Hamilton Hall
- 26 Wilson Hall
- 27 Johnstone Center
- 28 Johnstone Center
- 29 Mullin Hall
- 30 Culbertson Hall
- 31 Langford Hall
- 32 Wool Lab
- 33 Brecken Fieldhouse
- 34 Marjia Hosaurus H & P E Center
- 35 Forestry Science Lab
- 36 Healing Plant
- 37 Ryan Lab
- 38 Roberts Hall
- 39 Central Lab Animal Facility
- 40 Danforth Chapel
- 41 Herrick Hall
- 42 Hapner Hall
- 43 Atkinson Quadangles
- 44 Hannon Hall
- 45 Service Shop & Physical Plant
- 46 Auto Repair Shop
- 47 Cobblegh Hall
- 48 USDA
- 49 MSU Day Care Center



**MONTANA STATE UNIVERSITY**

**MONTANA**

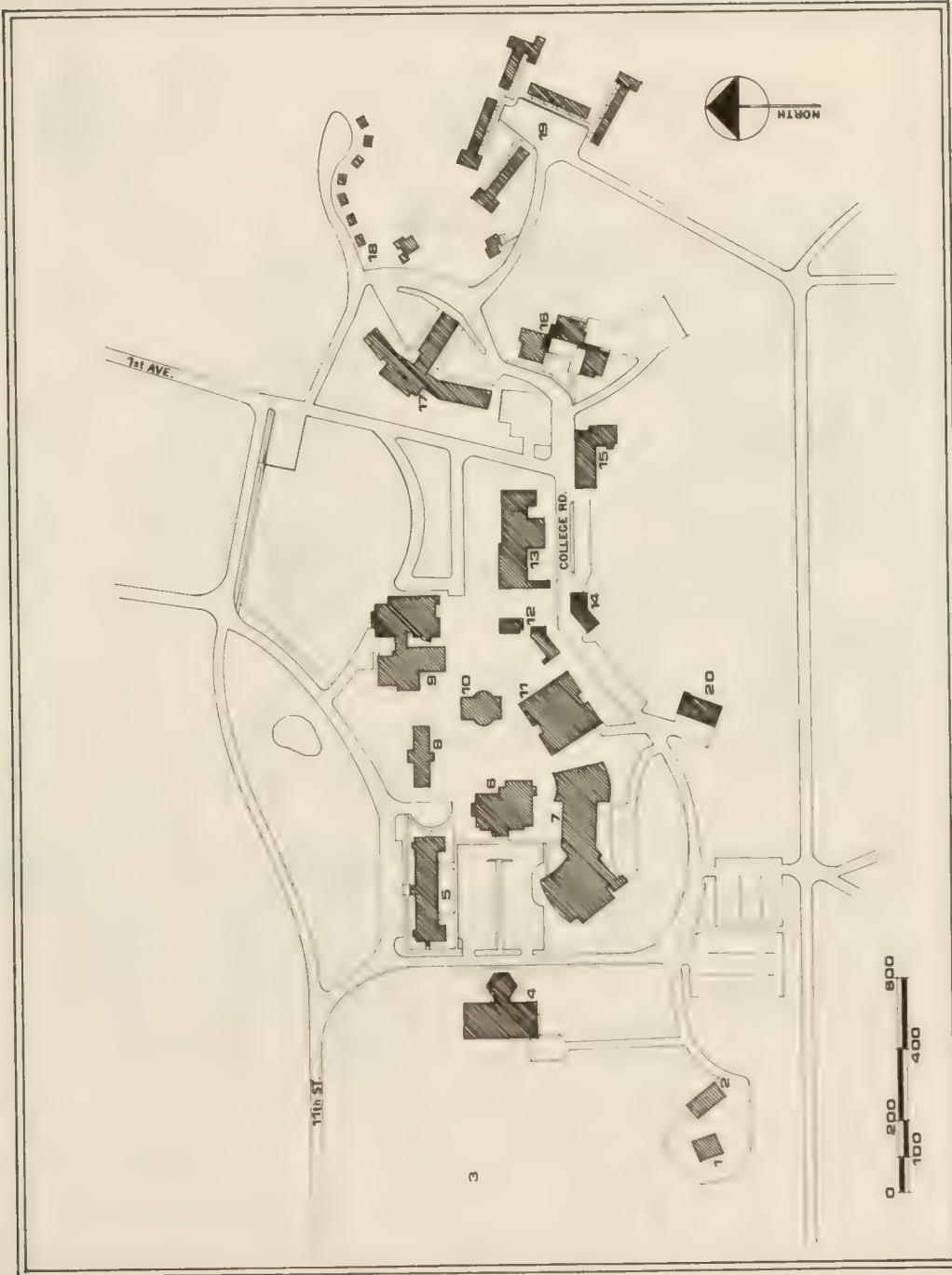
**BOZEMAN**



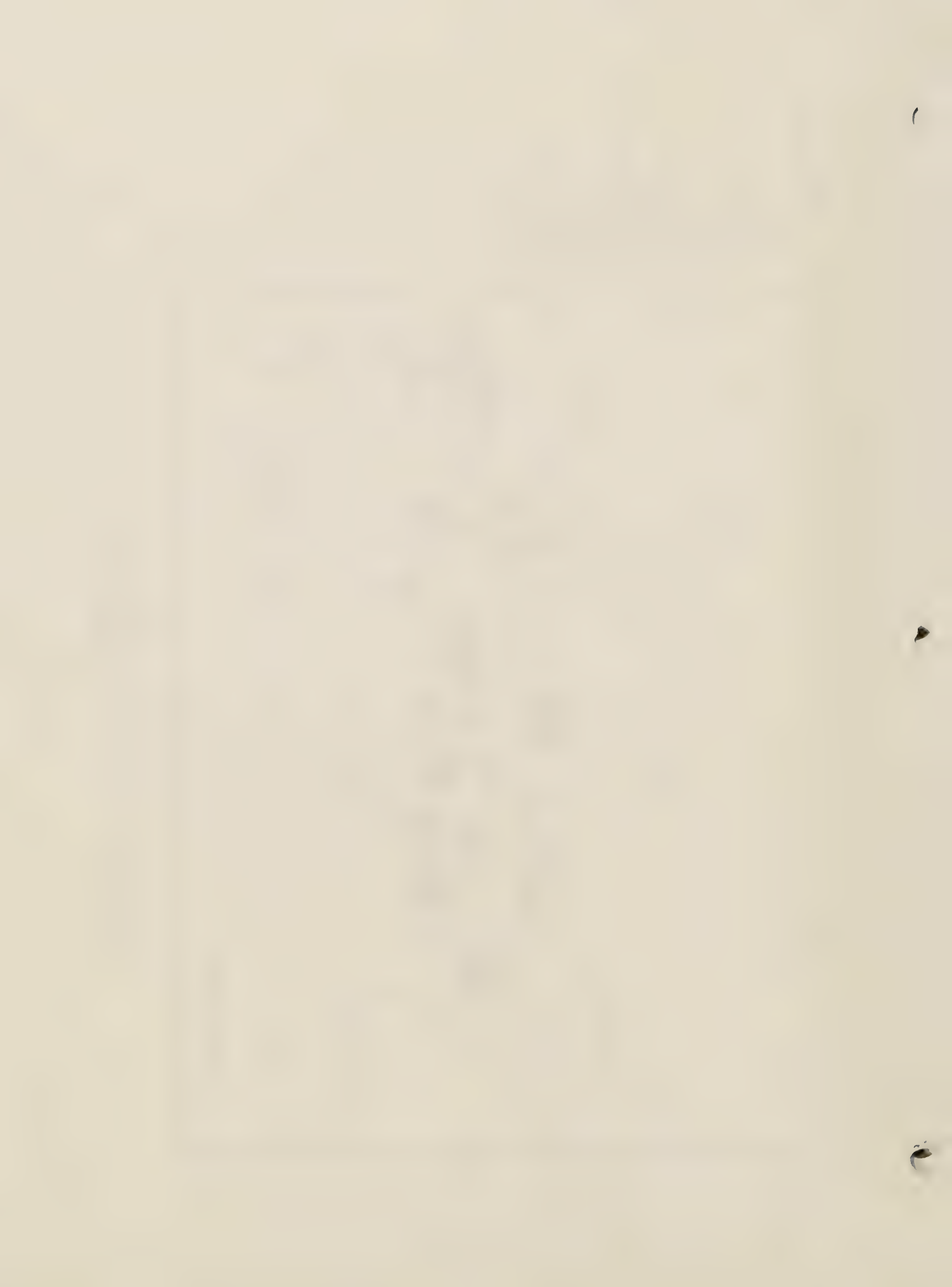


# **LEGEND** **NORTHERN MONTANA COLLEGE**

- 1 Garage
- 2 Physical Plant
- 3 Athletic Field
- 4 Hagener Science Center
- 5 Cowan Hall
- 6 Library
- 7 Gymnasium
- 8 Donaldson Hall
- 9 Student Union/Food Center
- 10 Pershing Hall
- 11 Brockman Center
- 12 Electronics Center
- 13 Auto Mechanics/Davey Lab
- 14 Auto Diagnostics Lab
- 15 Metals Technology
- 16 Mackenzie Hall
- 17 Morgan Hall
- 18 Residences
- 19 Married Student Housing
- 20 Farm Mechanics Buildings

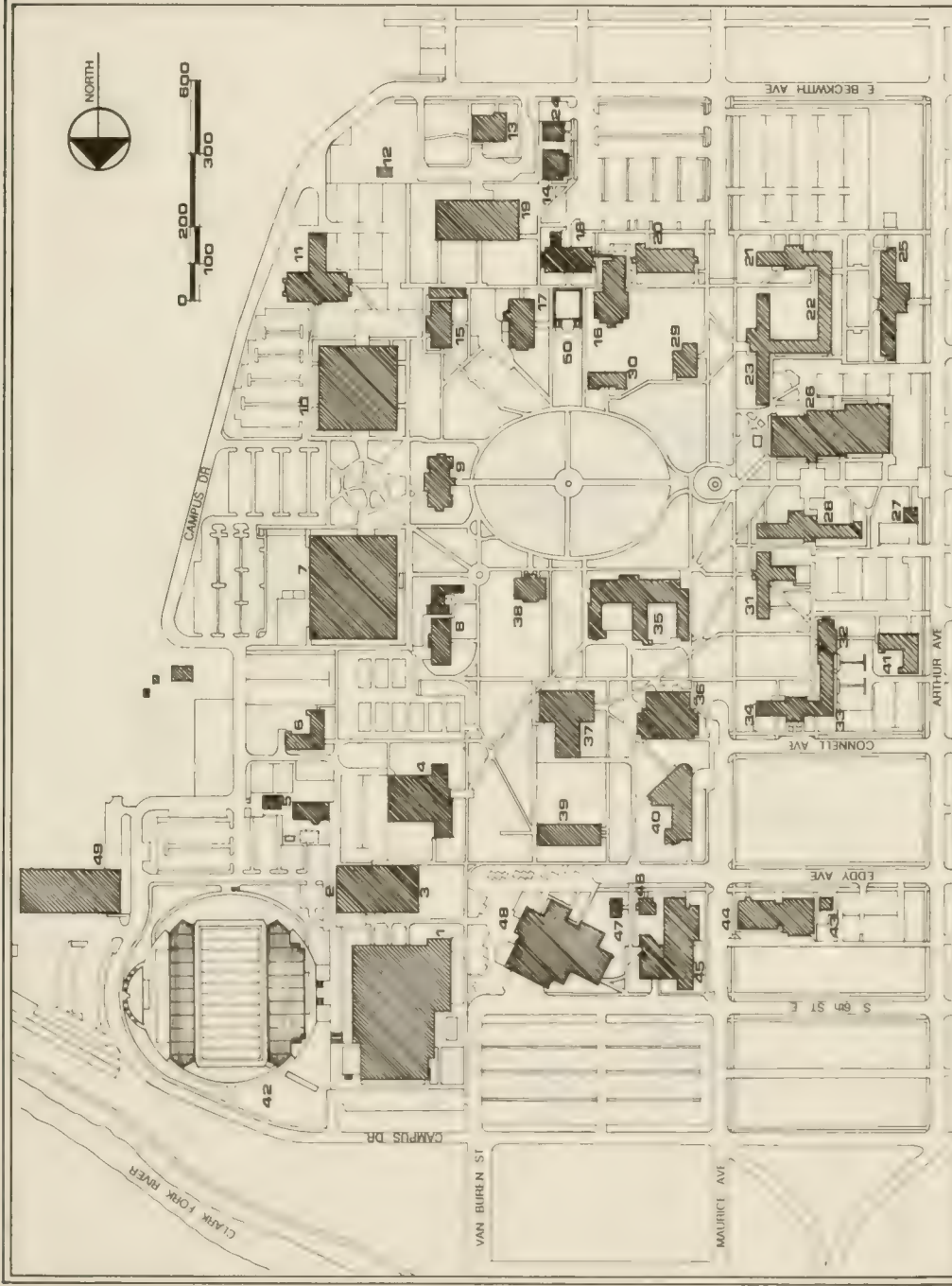


**NORTHERN MONTANA COLLEGE**  
**HAVRE**  
**MONTANA**



# LEGEND UNIVERSITY OF MONTANA

- 1 Field House
- 2 Grizzly Pool
- 3 Art Annex
- 4 McGill Hall
- 5 Heating Plant
- 6 Aber Hall
- 7 University Center
- 8 Botany
- 9 University Hall
- 10 Library
- 11 Schreiber Gymnasium
- 12 Forestry Bio-Lab
- 13 Forest Service Lab
- 14 Clinical Psychology Center
- 15 Forestry
- 16 Pharmacy/Psychology
- 17 Journalism
- 18 Chemistry-Pharmacy
- 19 Science Complex
- 20 Health Science
- 21 Elrod Hall
- 22 Dunway Hall
- 23 Craig Hall
- 24 Forest Service Lab/Adm'n
- 25 Bldg
- 26 Miller Hall
- 27 Lodge
- 28 600 University Avenue
- 29 Knowies Hall
- 30 Alumni Center
- 31 Mathematics
- 32 Turner Hall
- 33 Corbin Hall
- 34 North Corbin Hall
- 35 Brantly Hall
- 36 Liberal Arts
- 37 Fine Arts
- 38 Social Sciences
- 39 Rankin Hall
- 40 Business Administration
- 41 Music
- 42 Jesse Hall
- 43 Stadium
- 44 626 Eddy Avenue
- 45 Student Health Service
- 46 Law
- 47 724 Eddy Avenue
- 48 730 Eddy Avenue
- 49 Performing Arts/Radio T V
- 50 Building No. 32
- Lecture Hall



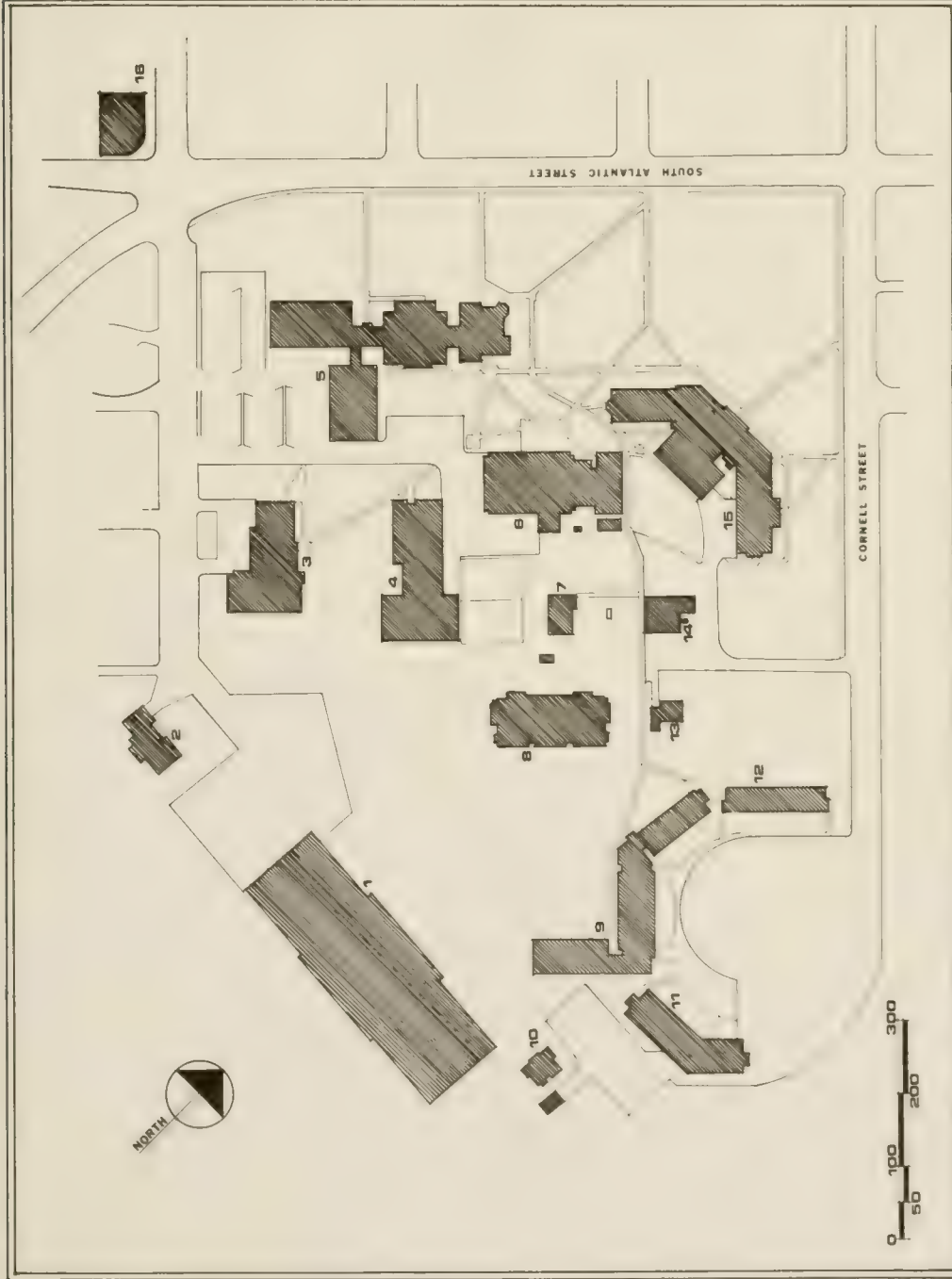
UNIVERSITY OF MONTANA  
MISSOULA MONTANA





# LEGEND WESTERN MONTANA COLLEGE

- 1 Physical Education Building
- 2 Residence
- 3 Student Union
- 4 Library/Administration
- 5 Main Hall
- 6 Art & Crafts/Swimming Pool
- 7 Residence
- 8 Faculty Office Building
- 9 Dormitory
- 10 Residence
- 11 Clark Hall (Dorm)
- 12 Student Apartments
- 13 Residence
- 14 Boiler Plant
- 15 Mathews Hall (Dorm)
- 16 Industrial Arts/Vehicle Maintenance



## WESTERN MONTANA COLLEGE DILLON MONTANA

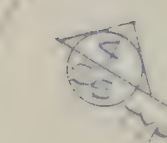




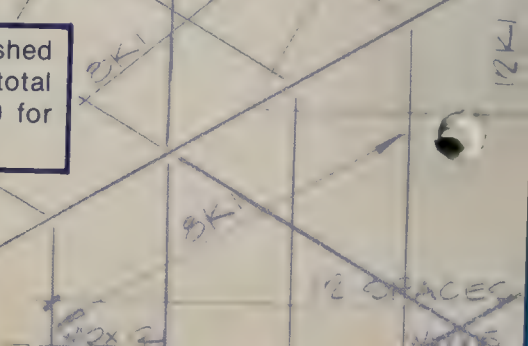
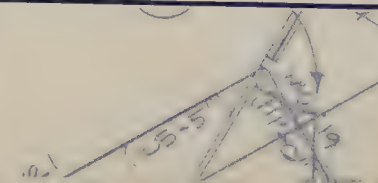
4

2" 8"  
TYPE N  
ROOF DE  
TYPICAL  
LOWER ROOF

86'-0"



260 copies of this public document were published at an estimated cost of \$15.38 per copy, for a total cost of \$4,000.00, which includes \$4,000.00 for printing and \$.00 for distribution.





# Reclamation and Development Grants Program

Project Evaluations and  
Recommendations for  
1992 - 1993 Biennium  
and Status Report for  
Previously Funded Projects

January 1991





RECLAMATION  
AND  
DEVELOPMENT  
GRANTS PROGRAM

Project Evaluations and Recommendations  
for 1992-1993 Biennium

and

Status Report for  
Previously Funded Projects

January 1991

Montana Department of Natural  
Resources and Conservation





## TABLE OF CONTENTS

	Page
Alphabetical Index of Projects by Applicant . . . . .	v
CHAPTER I	
Program Description and Procedures. . . . .	1
Program Information. . . . .	1
Project Eligibility. . . . .	1
Applicant Eligibility. . . . .	2
Funding Limits . . . . .	2
Application Review and Ranking Procedures. . . . .	2
Recommendations. . . . .	4
CHAPTER II	
Ranking of and Funding Recommendations for Projects Proposed to the 1991 Legislature. . . . .	5
CHAPTER III	
Summaries of Projects Recommended for Funding . . . . .	7
CHAPTER IV	
Summaries of Projects Not Recommended for Funding . . . . .	87
CHAPTER V	
Status Report of Active Projects Approved for Funding by the 1989 Legislature. . . . . ,	135
CHAPTER VI	
Status Report of Active Projects Approved for Funding by the 1987 Legislature. . . . .	139
CHAPTER VII	
Status Report of Active Projects Approved for Funding by the 1985 Legislature. . . . .	147



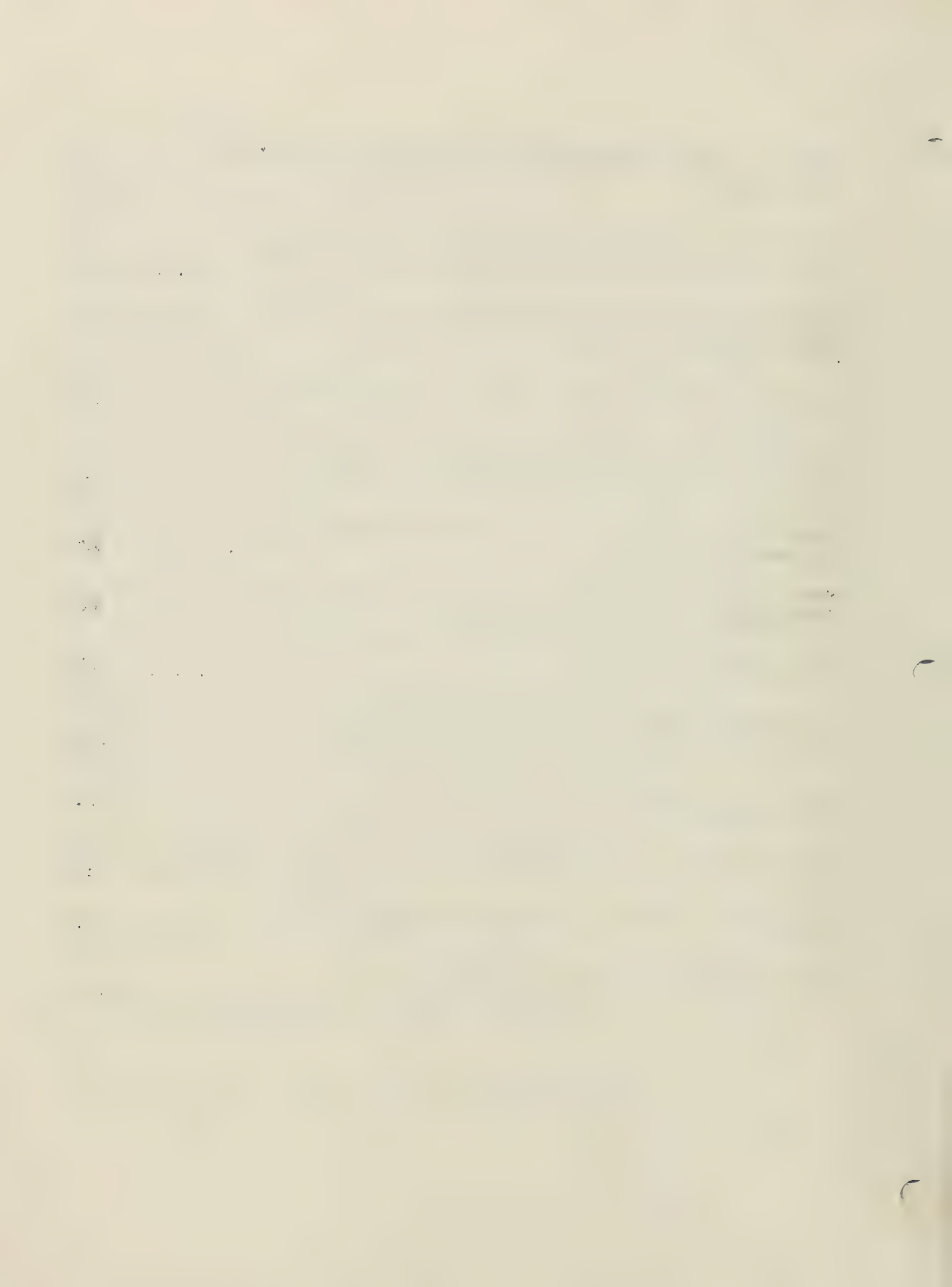
## ALPHABETICAL INDEX OF PROJECTS BY APPLICANT

APPLICANT NAME--Project Title	Page
BUTTE-SILVER BOW, GOVERNMENT OF--Upper Clark Fork River Basin Coordinator . . . . .	87
BUTTE-SILVER BOW, GOVERNMENT OF--WASTEC . . . . .	7
CARBON COUNTY, STILLWATER COUNTY, AND BIG TIMBER, CITY OF--Integrated Waste Management in Southcentral Montana. . . . .	39
CHINOOK DIVISION IRRIGATION ASSOCIATION--Milk River Water Supply Project Rehabilitation and Betterment Element. . .	11
DEER LODGE VALLEY CONSERVATION DISTRICT--A Feasibility Study of the Use of Timber Industry Wood Wastes for Reclamation of Mine-Impacted Areas. . . . .	119
FORT PECK ASSINIBOINE AND SIOUX TRIBES--Extent, Magnitude, and Movement of Contamination in Unconsolidated Quaternary Aquifers in and near East Poplar Oil Field, Northeastern Montana . . . . .	77
GLACIER COUNTY--Glacier County Experimental Lateral Drilling Project. . . . .	132
GLACIER COUNTY CONSERVATION DISTRICT--Comprehensive Evaluation of Groundwater Contamination, Red River Drainage, Glacier and Toole Counties, Montana . . . . .	71
HEALTH AND ENVIRONMENTAL SCIENCES, DEPARTMENT OF/ CENTRAL MONTANA HEALTH DISTRICT--Arro Refinery Sludge Cleanup. . . . .	18
HEALTH AND ENVIRONMENTAL SCIENCES, DEPARTMENT OF/ WATER QUALITY BUREAU--Hydrogeology, Land Use, and Chemical Quality of Water Resources in the Clarks Fork Yellowstone River Basin, Montana . . . . .	74
HEALTH AND ENVIRONMENTAL SCIENCES, DEPARTMENT OF/ WATER QUALITY BUREAU--Nonpoint Pollution Control Project in Montana. . . . .	43
HOMESTEAD ACRES WATER AND SEWER DISTRICT-- Bootlegger Mine Reclamation Project . . . . .	109
HOT SPRINGS, TOWN OF--Reutilization of Hot Springs Mineral Water Resource. . . . .	124

JUDITH BASIN CONSERVATION DISTRICT--Community- Led Rural Development in Montana. . . . .	14
JUDITH BASIN COUNTY--Development of Iron Ore Deposit . . . . .	112
MONTANA BOARD OF OIL AND GAS CONSERVATION-- Abandoned Well Plugging Project "A" . . . . .	21
MONTANA BOARD OF OIL AND GAS CONSERVATION-- Abandoned Well Plugging Project "B" . . . . .	25
MONTANA BOARD OF OIL AND GAS CONSERVATION-- Abandoned Well Plugging Project "C" . . . . .	50
MONTANA BUREAU OF MINES AND GEOLOGY--Downhole Geophysical Logging Techniques Applied to Cased Water Well or Monitor Well Completion . . . . .	47
MONTANA BUREAU OF MINES AND GEOLOGY-- Hydrogeologic Characterization of Landfill Sites in Montana. . . . .	116
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY-- Detoxification of Acid Mine Drainage from Berkeley Pit Waters Using Chelation Affinity Chromatography. . . . .	99
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY/ BIOLOGICAL SCIENCES, DEPARTMENT OF--Constructing Artificial Bogs and Wetlands in the Uncle Sam Gulch/ Cataract Creek Area to Remediate Present Damage and Mitigate Future Damage Due to Acid Mine Drainage From the Crystal Mine, Northern Jefferson County, Montana . . . . .	96
MONTANA COLLEGE OF MINERAL SCIENCE AND TECHNOLOGY/ CENTER OF EXCELLENCE--Pilot Plant Treatment of Contaminated Water from the Berkeley Pit. . . . .	89
MONTANA SALINITY CONTROL ASSOCIATION--Soil and Water Nonpoint Source Pollution Control and Management. . . . .	32
MONTANA STATE LIBRARY--NRIS Program--Emphasis on the Natural Heritage Program and Geographic Information System (GIS). . . . .	28
MONTANA STATE UNIVERSITY/ANIMAL AND RANGE SCIENCES, DEPARTMENT OF--Pyrite Amendments to Improve Plant and Animal Nutrition. . . . .	102



MONTANA STATE UNIVERSITY/BIOLOGY, DEPARTMENT OF-- Trout Stream Restoration from Placer Mining and Flood Damage. . . . .	114
MONTANA STATE UNIVERSITY/RECLAMATION RESEARCH UNIT--Effect of Sodium, Chlorine, and Total Salts from Treated Cyanide Solutions on Soils . . . . .	35
NATURAL RESOURCES AND CONSERVATION, DEPARTMENT OF/ WATER MANAGEMENT BUREAU--Arsenic in Upper Missouri River Basin Surface Water and Groundwater . . . . .	64
PESTICIDE COUNTY CLEANUP COMMITTEE--Pesticide Contamination Cleanup . . . . .	58
SHERIDAN COUNTY CONSERVATION DISTRICT--Extent of Oil-Field Waste Contamination in Lakes and Aquifers in Eastern Sheridan County . . . . .	81
STATE LANDS, DEPARTMENT OF--Cataract Creek Reclamation Project . . . . .	93
STATE LANDS, DEPARTMENT OF--Comet Mine Wetlands Development . . . . .	67
STATE LANDS, DEPARTMENT OF--Well Assessment and Abandonment . . . . .	61
STILLWATER CONSERVATION DISTRICT--Field Evaluation of Plastic Lining and Fabrication Process . . . . .	130
SWEET GRASS COUNTY CONSERVATION DISTRICT--An Accelerated Soil Survey Program for Montana . . . . .	127
TOOLE COUNTY--North Toole County Reclamation Project . . . . .	54
YELLOWSTONE COUNTY--Yellowstone County LIS/GIS Project . . . . .	106
YELLOWSTONE COUNTY CONSERVATION DISTRICT-- ZooMontana Construction Fund Drive. . . . .	121



## CHAPTER I

### PROGRAM DESCRIPTION AND PROCEDURES

#### Program Information

The Reclamation and Development Grants Program (RDGP) is a state-funded grants program designed to fund projects that *"indemnify Montana citizens for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the people of Montana"* (Section 90-2-1102, MCA). The program, established by the 1987 Montana Legislature, is administered by the Montana Department of Natural Resources and Conservation (DNRC).

In February 1990, an extensive promotional effort was launched that targeted all Montana communities, counties, the university system, conservation districts, state agencies, state legislators, and others who might benefit by program participation. This effort included mailing application materials and holding application instruction workshops throughout the state. The application deadline was May 15, 1990. DNRC received 39 applications for RDGP funding totaling over \$8.8 million.

The funding source for this program is the interest income from the Resource Indemnity Trust Fund (RITF). This fund, established by Section 15-38-201, MCA, receives proceeds from taxes levied on mineral production. The 1987 Montana Legislature directed that, beginning in state fiscal year 1990, 46 percent of the interest income from RITF must be allocated to the Reclamation and Development Grants Program (approximately \$8.1 million for the 1992-1993 biennium). During state fiscal years 1986 through 1991, 64 projects totaling more than \$10.4 million have been funded.

The Reclamation and Development Grants Program Act requires that the governor submit, by the first day of each regular session of the legislature, a list of all grant proposals received with his recommended priorities for funding. Administrative rules further provide that DNRC must furnish to the legislature a status report on previously funded projects. This report is the result of those directives.

#### Project Eligibility

The following excerpts from the Reclamation and Development Grants Program Act (Section 90-2-1111, MCA) establish criteria that projects must meet in order to be eligible for funding.

- (1) Except as provided under subsection (2), to be eligible for funding under the Reclamation and Development Grants Program, the proposed project must provide benefits in one or more of the following categories:
  - (a) reclamation of land, water, or other resources adversely affected by mineral development;
  - (b) mitigation of damage to public resources caused by mineral development;
  - (c) research, demonstration, or technical assistance to promote the wise use of Montana minerals, including efforts to make processing more environmentally compatible;
  - (d) investigation and remediation of sites where hazardous wastes or regulated substances threaten public health or the environment; and
  - (e) research to assess existing or potential environmental damage resulting from mineral development.
- (2) If sufficient eligible and qualified applications satisfying the mineral development objectives provided for in subsection (1) are not received, or if there is a crucial state need, DNRC may evaluate and the governor may recommend that the legislature approve funding for projects that:
  - (a) enhance Montana's economy through the development of natural resources; or
  - (b) develop, promote, protect, or further Montana's total environmental and public interest, including the general health, safety, welfare, and public resources of Montana citizens and communities.

### Applicant Eligibility

Any department, agency, board, commission, or other division of state government or any city, county, or other political subdivision or tribal government within the state may apply for a grant from the Reclamation and Development Grants Program.

### Funding Limits

No grant may exceed \$300,000. An applicant proposing more than one project may submit a separate application for each. There is no minimum funding limit.

### Application Review And Ranking Procedures

The grant applications were evaluated for the proposed projects' technical and financial feasibility, public benefits to be provided, need and urgency, and impacts on the environment.



Reviewers included staff members of the department's Resource Development, Conservation Districts, and Water Management Bureaus, with assistance from federal, state, and university personnel having expertise in specific project areas. For each application, a descriptive project summary was written incorporating the concerns, ideas, and comments of the project reviewers; those summaries appear in Chapter III and Chapter IV of this report.

More funds are requested than are available. Therefore, the department ranks feasible projects, so that it can recommend funding priority and funding level to the legislature. Evaluation criteria established by the 1987 legislature include, but are not limited to:

1. The degree to which the project will provide benefits in its eligibility category or categories
2. The degree to which the project will provide public benefits
3. The degree to which the project will promote, enhance, or advance the policies and purposes of the Reclamation and Development Grants Program
4. The degree to which the project will provide for the conservation of natural resources
5. The degree of need and urgency for the project
6. The extent to which the project sponsor or local entity is contributing to the costs of the project or is generating additional nonstate funds
7. The degree to which jobs are created for persons who need job training, receive public assistance, or are chronically unemployed
8. Any other criteria DNRC considers necessary to carry out the policies and purposes of the Reclamation and Development Grants Program

Under the ranking system, a proposal could receive a maximum of 215 points. Specific criteria were established for each category to provide consistency. Of the following criteria, public benefits and need and urgency were weighted most heavily.

	<u>Maximum Points</u> <u>Possible</u>
1. Public Benefits	90
2. Need and Urgency	50
3. Appropriateness of Technical Design	40
4. Financial Feasibility	15
5. Project Management Organization	<u>20</u>
Total Possible Points:	215

### Recommendations

After ranking the projects and recommending funding, the Conservation and Resource Development Division made its recommendations to the DNRC director. The director then presented DNRC's recommendations to the governor. An appropriations bill listing the governor's recommendations will be introduced to the 1991 legislature. By appropriation or other appropriate means, the legislature may approve grants for those projects it finds consistent with the policies and purposes of RDGP.

**CHAPTER II**  
**RANKING OF AND FUNDING RECOMMENDATIONS**  
**FOR PROJECTS PROPOSED TO THE 1991 LEGISLATURE**

NAME OF APPLICANT	PROJECT NAME	PUBLIC BENEFITS	NEED AND URGENCY	TECHNICAL DESIGN	FINANCIAL FEASIBILITY	PROJECT MANAGEMENT	TOTAL	RECOMMENDED FUNDING	ACCUMULATIVE TOTAL
1. Butte-Silver Bow Government	WASTEC	79	49	36	13	18	195	\$296,113	\$296,113
2. Chinook Division Irr Association	Rehab. & Betterment Element of Milk River	68	50	36	13	15	182	\$300,000	\$596,113
3. Judith Basin CD	Community-Led Rural Development in Montana	79	46	28	11	14	178	\$170,000	\$766,113
4. DHES/Cent MT Health District	Arro Refinery Sludge Cleanup	70	45	32	6	18	171	\$300,000	\$1,066,113
5. MT Board of Oil and Gas Cons.	Abandoned Well Plugging Project "A"	70	42	34	8	16	170	\$300,000	\$1,366,113
6. MT Board of Oil and Gas Cons.	Abandoned Well Plugging Project "B"	67	41	34	8	16	166	\$295,000	\$1,661,113
7. MT State Library	NRIS, Emphasis on the Nat. Herit. Progr. and GIS	65	43	29	9	17	163	\$227,600	\$1,888,713
8. MT Salinity Control Association	Soil & Water Nonpoint SRC Poll. Control & Mgmt.	69	41	28	6	16	160	\$137,500	\$2,026,213
9. MSU/Reclamation Research Unit	Effect of Sodium, Chlorine, & Total Salts	60	40	34	7	18	159	\$82,885	\$2,109,098
10. Carbon County, et al	Integrated Waste Management in SC MT	68	38	25	12	15	158	\$45,437	\$2,154,535
11. DHES/Water Quality Bureau	Nonpoint Pollution Control Project	59	43	25	11	16	154	\$146,620	\$2,301,155
12. MT Mines & Geology, Bureau of	Downhole Geo Logging Tech/Well	59	41	28	8	17	153	\$39,749	\$2,340,904
13. MT Board of Oil and Gas Cons.	Abandoned Well Plugging Project "C"	63	33	32	8	16	152	\$144,000	\$2,484,904
14. Toole County	N. Toole County Reclamation Project	61	39	27	5	12	144	\$105,000	\$2,589,904
15. Pesticide Co. Cleanup Committee	Pesticide Contamination Cleanup	62	39	27	3	12	143	\$300,000	\$2,889,904
16. State Lands, Dept. of	Well Assessment and Abandonment	59	32	30	9	12	142	\$300,000	\$3,189,904
17. DNRC/Water Mgmt Bureau	Arsenic in Upper Missouri River Basin	50	36	25	11	18	140	\$179,330	\$3,369,234
18. State Lands, Dept. of	Comet Mine Wetlands Development	56	46	23	7	7	139	\$250,700	\$3,619,934
19. Glacier Co. CD	Comprehensive Eval. of Groundwater Contamination	45	40	18	7	16	126	\$197,453	\$3,817,387
20. DHES/Water Quality Bureau	Hydrogeo. Land Use, & Chemical Qual of Water	37	31	22	10	16	116	\$218,250	\$4,035,637
21. Fort Peck Assin/Sioux Tribes	Extent, Mag., & Mvmt. of Contamination	27	35	17	9	16	104	\$290,400	\$4,326,037
22. Sheridan Co. CD	Extent of Oil-Field Waste Contamination	27	30	18	7	15	97	\$134,736	\$4,460,773
23. Butte-Silver Bow Government (NF)	Upper Clark Fork River Basin Coordinator	0	0	0	0	0	0	\$0	\$4,460,773
24. Montana Tech (NF)	Pilot Plant Treatment of Cont. Water from Pit	0	0	0	0	0	0	\$0	\$4,460,773
25. State Lands, Dept. of (NF)	Cataract Creek Reclamation Project	0	0	0	0	0	0	\$0	\$4,460,773
26. Montana Tech (NF)	Const. Art Bogs and Wetlands	0	0	0	0	0	0	\$0	\$4,460,773
27. Montana Tech (NF)	Detoxification of Acid Mine Drainage from Pit	0	0	0	0	0	0	\$0	\$4,460,773
28. MSU/Animal & Range Sci. Dept. (NF)	Pyrite Amndmts. to Improve Plant & Animal Nutr	0	0	0	0	0	0	\$0	\$4,460,773
29. Yellowstone County (NF)	Yellowstone Co. LIS/GIS Project	0	0	0	0	0	0	\$0	\$4,460,773
30. Homestead Acres Water & Sewer (NF)	Bootlegger Mine Reclamation Project	0	0	0	0	0	0	\$0	\$4,460,773
31. Judith Basin Co. (NF)	Development of Iron Ore Deposit	0	0	0	0	0	0	\$0	\$4,460,773
32. MSU/Biology Department (NF)	Trout Stream Restoration	0	0	0	0	0	0	\$0	\$4,460,773
33. MT Mines & Geology, Bureau of (NF)	Hydrogeologic Char of Landfill Sites in MT	0	0	0	0	0	0	\$0	\$4,460,773
34. Deer Lodge Valley CD (NF)	Feasibility Study of Wood Wastes	0	0	0	0	0	0	\$0	\$4,460,773
35. Yellowstone Co. CD (NR)	Zoo/Montana Construction Fund Drive	0	0	0	0	0	0	\$0	\$4,460,773
36. Hot Springs, Town of (NR)	Re-Utl. of Hot Springs Mineral Water Res	0	0	0	0	0	0	\$0	\$4,460,773
37. Sweet Grass Co. CD (NR)	Accelerate Soil Survey Prog. for MT	0	0	0	0	0	0	\$0	\$4,460,773
38. Stillwater Cons. Dist (NR)	Field Eval. of Plastic Lining & Fab. Process	0	0	0	0	0	0	\$0	\$4,460,773
39. Glacier Co. (NR)	Glacier Co. Experimental Lateral Drilling Proj.	0	0	0	0	0	0	\$0	\$4,460,773

(NF) = Ranked, but no funding recommended  
(NR) = Not ranked, ineligible, did not meet crucial state need test, not qualified





### CHAPTER III

#### SUMMARIES OF PROJECTS RECOMMENDED FOR FUNDING

Summaries of all projects recommended for RDGP funding, along with the amounts recommended, are presented in this chapter. The summaries appear in the order in which the projects are ranked.

- 1 -

APPLICANT NAME: Butte-Silver Bow Government

PROJECT/ACTIVITY NAME: WASTEC (Water, Air, Soils Testing and Evaluation Center)

AMOUNT REQUESTED: \$ 296,113

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 1,582
U.S. Department of Energy (DOE)	\$ 7,636,000

TOTAL PROJECT COST: \$ 7,933,695

PROJECT DESCRIPTION:

This funding proposal would aid applicant's efforts to locate and develop a U.S. Department of Energy (DOE) National Waste Technology Center (hereafter known as the "Center") in Butte, Montana. A main function of the Center would be to develop, test, and certify innovative technologies to effectively treat hazardous waste materials found in four Clark Fork Superfund sites established under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The four "Clark Fork sites" are the Silver Bow Creek/Butte Area, Anaconda Smelter, Milltown Reservoir, and Montana Pole. Collectively they extend downstream from the City of Butte in the Upper Silver Bow Creek drainage area through the Deer Lodge Valley to Missoula. Within the Clark Fork sites are high priority problem areas that are being or will be addressed over the next several years, including: the Berkeley Pit and underground mine flooding; mine waste deposits on floodplains (including the Colorado tailings); soil contamination in the vicinity of Butte, Walkerville, and Anaconda; the Warm Springs ponds; and the Old Works tailings. The environmental problems associated with each area are significant and pose threats to groundwater, surface water, and the health of area citizens. In addition, there are many unknown factors associated with the Clark Fork sites, and new problems continue to surface.



Before a technology can be used to remediate a CERCLA (Superfund) site, the federal government requires considerable test data as to the effectiveness of the technology. These data must be generated from a demonstration site of sufficient scale to assure the applicability, efficiency, and operability of the technology on the site. The Clark Fork sites appear to meet this requirement ideally.

The applicant proposes to establish such a testing and evaluation center. Technologies developed at the Center would then be transferred to other public sector agencies or private entities to be used in the actual cleanup process. Technologies developed would also have potential applications for environmental problems elsewhere in the state and nation.

Butte-Silver Bow's Reclamation and Development Grant application for \$296,113 would be matched by a significant level of funding by DOE. The Center concept involves job retention and creation and represents a very important component of Butte-Silver Bow's economic development strategy.

#### TECHNICAL ASSESSMENT:

The health and welfare of the residents of Butte-Silver Bow, Anaconda, Deer Lodge, and other communities within the Clark Fork River basin would benefit from finding effective, efficient technologies to treat the waste materials left behind by 110 years of mining in the area.

WASTEC may hold the key to developing the necessary technologies that can be used by the private or public sector to mitigate mineral development damage at the Superfund sites. Additionally, the technologies might be transferable to solve non-Superfund environmental contamination problems in Montana and the nation. DOE, for instance, is especially interested in the development of groundwater decontamination processes, as groundwater contamination is the principal waste management problem in the U.S. today.

The creation of a DOE National Testing and Evaluation Center for Non-Radioactive Waste Treatment Technology Development would also offer southwest Montana and the state a unique economic development opportunity. These benefits would include:

1. Creation of an opportunity to employ a construction work force of 50 to 75 for a one- or two-year period
2. Creation of a permanent operational and administrative work force of 100 to 150

3. Direct financial impact on the Butte-Silver Bow community projected to be \$12 to \$15 million annually, of which approximately 60 percent would be in the form of employee wages and benefits
4. Expansion of Montana's technical base and work force, thereby complementing efforts of units of the Montana University System, their associated Centers of Excellence, and the Montana Science and Technology Alliance
5. Creation of additional job opportunities for graduates of the Montana University System
6. Opportunity to create technical business spin-offs from technologies developed, tested, and certified by the Center

Overall, community support and advance planning for this project have been impressive.

#### FINANCIAL ASSESSMENT:

Estimated costs for contracted services (broken down by activity) are:

Screen water and soil treatment technologies	\$ 10,000
Develop design requirements	15,000
Select initial group of technologies for evaluation	2,000
Develop conceptual design of existing facility modifications and pilot/demo installations	130,000
Complete EPA test center application	25,000
Complete environmental assessment and permit application	98,000
Prepare technology transfer plan	<u>10,000</u>
TOTAL	\$290,000

Salaries and wages account for the remaining \$6,113. Costs are not unrealistic for the work being proposed.

The work described here would culminate in the completion of conceptual designs for existing facility modifications and pilot plant/demonstration scale processes, plus permit applications. Subsequent activities (and funding) would target preliminary and detailed engineering designs of candidate technologies, construction of facility modifications, testing, and technology transfer.

At this writing, exact uses and amount of federal match funding are not finalized. Butte-Silver Bow has received \$100,000 thus far. Funding in the amount of \$3.5 million has

been approved by the U.S. Senate. Congressional approval for further funding is anticipated early in 1991.

Although RDGP funds are apparently not essential to receipt of federal funds, state funding and participation in all likelihood would significantly enhance the probability of federal funds being secured.

#### ENVIRONMENTAL EVALUATION:

The evaluation of the feasibility of locating a testing and evaluation center in Butte would have little, if any, impact on the environment. However, technologies developed as a result of this project would potentially have a very positive impact on soils, water, vegetation, and air quality of the area.

#### PUBLIC BENEFITS ASSESSMENT:

The principal public benefits associated with this project would be development of information on innovative environmental technologies and bolstering of the state's economy. If this project leads to siting of WASTEC in Butte, the benefits would be considerable.

#### RECOMMENDATIONS:

A grant of up to \$296,113 is recommended for this project, contingent upon the following:

1. DNRC must approve the project scope of work and budget.
2. Butte-Silver Bow must secure at least \$1 million in federal match funds.



APPLICANT NAME: Chinook Division Irrigation Association

PROJECT/ACTIVITY NAME: Milk River Water Supply Project  
Rehabilitation and Betterment Element  
(Canals and Laterals)

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Water Development Program Grant	\$ 100,000
Renewable Resource Development Program Grant	\$ 100,000
Applicant	\$ 1,002,775
U.S. Bureau of Reclamation Loan	\$ 4,508,325

TOTAL PROJECT COST: \$ 6,011,100

PROJECT DESCRIPTION:

The 172 farms within the Chinook Irrigation Division comprise just over 38,000 irrigated acres of the 92,000-acre Milk River Irrigation Project. The project facilities are operated by the U.S. Bureau of Reclamation. Most of the facilities for the five irrigation districts that make up the Chinook Division were financed and constructed prior to 1911. Because many of the project structures are more than 70 years old, they have become obsolete, inefficient, and--in some cases--hazardous to project operators.

The Chinook Division Irrigation Association intends to repair and replace some existing structures and add new structures as part of a basin wide program to reduce chronic water shortages that have plagued the Milk River drainage. Based on preliminary engineering design work, project rehabilitation costs for the Chinook Division are estimated to be \$6,011,100 (1989 dollars). The association is seeking a U. S. Bureau of Reclamation Small Projects Loan for \$4,508,325 to help finance the rehabilitation effort. In order to secure this interest-free, 30-year federal loan, the districts must meet a 25 percent local cost-share requirement. The districts have applied for a total of \$500,000 in grants from DNRC's Water Development, Renewable Resource Development, and Reclamation and Development Grants Programs. These grant funds, together with a \$1,002,775 local contribution, will meet the local cost-share requirement for the federal loan.

The project will involve lining about 53 miles of canals and laterals; cleaning and reshaping along 35.8 miles of main canal and 41 miles of laterals; cleaning and reshaping along 76.5 miles

of drains; installing access roads on the main canals and some laterals; installing three concrete rating structures on main canals and laterals; rehabilitating two pumping stations, a diversion structure, and a headworks structure; replacing seven siphons and installing two new siphons; replacing a wasteway; repairing or replacing 12 checks; and installing 106 measuring devices on canals and laterals. This rehabilitation effort would reduce irrigation water shortages by an estimated 9,870 acre-feet annually. The RDGP grant would be used to clean, reshape, and line canals and laterals; clean and reshape drains; and install access roads.

#### TECHNICAL ASSESSMENT:

Under historical climate conditions and at the present level of development, Milk River irrigators can expect to face significant water shortages in six years out of ten. The average annual shortages are estimated at 122,600 acre-feet or about 20 percent of diversion requirements. These shortages are expected to increase by about 28,000 acre-feet per year in the future when Canada and tribes on the Fort Belknap Reservation make use of their legal share of Milk River waters.

The Milk River Basin has been the subject of an intensive joint effort between the irrigation districts in the basin, the U.S. Bureau of Reclamation, the Department of Natural Resources and Conservation, and others to develop a strategy to reduce chronic water shortages. A water supply simulation model developed for the basin, irrigator surveys, and field investigations have revealed that shortages are caused by periodic severe droughts, overdevelopment of acreage for irrigation relative to the water supply the project was originally designed to provide, and an aging distribution system that is unable to carry enough water to meet the demands of current irrigation operations. As a result of these efforts, a three-phase plan for the Milk River was formulated that is aimed at improving management of available water, increasing water use efficiency through structural rehabilitation of the entire system, and increasing basin water supply.

The proposed project is part of the second phase of a technically sound, well-documented, and well-supported strategy to reduce water shortages. Successful completion of the proposed project may be especially important because it will result in the first substantial, on-the-ground improvements to local facilities arising from the multi-year basin planning effort. In addition, this effort may help pave the way for financing of future system improvements through the federal Pick-Sloan Program.

Preliminary project costs were developed by engineers for the U.S. Bureau of Reclamation. Final project designs will be approved by the U.S. Bureau of Reclamation.



### FINANCIAL ASSESSMENT:

All grant funds will be used to fund construction during the first three years of the seven-year design and construction period. Final design and engineering are expected to cost almost \$800,000; construction costs are estimated at about \$5.2 million. The costs of the project are lower than might be expected because much of the work will be done by the irrigation district work force.

Farm budget studies by the Bureau of Reclamation indicate that, under current conditions, the ability of the district irrigators to pay for improvements is zero. A survey of irrigators showed that they would be willing to pay up to \$5.00/acre/year for these improvements, in spite of the fact that doing so would reduce their disposable income below Bureau of Reclamation guidelines.

Current project assessments for irrigated acreage within the Chinook Division average \$6.50/acre/year. Without the grant money, annual costs to irrigators for the Small Projects Loan would increase by \$5.60/acre/year. With all of the grant money requested, annual payments would increase by \$3.90/acre/year.

### ENVIRONMENTAL EVALUATION:

The project would have positive environmental impacts on some resources and negative environmental impacts on others.

The most significant negative impact would be the loss of over 700 acres of vegetation and wildlife habitat as a result of construction, ditch cleaning, and the reduction in seepage that sustains some of these areas. Wildlife habitat loss may be mitigated to some extent by re-establishment of some habitat along rights-of-way and off-site improvement of habitat at Lonesome Lake near Big Sandy. Groundwater recharge in some areas would also be reduced.

Positive impacts are also associated with decreasing the volume of leakage from the distribution system. These include reducing the extent of water-logged and seep-affected agricultural and residential lands and improving groundwater quality.

### PUBLIC BENEFITS ASSESSMENT:

Public benefits associated with this project are substantial. The area's economy is heavily reliant on agriculture, an important component of which is supported by irrigation. The project would result in a more dependable water supply for 172 family farmers in the Chinook Division and

indirectly benefit many of the 15,540 rural and urban people living in the Havre, Chinook, and Harlem areas.

Improved water management and reduced leakage from canals and laterals would reduce irrigation shortages by almost 10,000 acre-feet per year. These actions would also reduce the number of acres of potentially productive lands now lost to saline seep and water logging as a result of distribution system leakage. Pondered water would also be reduced, decreasing mosquito populations and the costs of controlling this well-known problem. The infusion of \$6 million of project funds--75 percent of which would be federal money--into the local economy during the seven-year construction period would create some construction jobs and benefit local businesses. Such benefits may be especially important for Blaine County, since it has the highest unemployment rate of any county along the Hi-Line. Finally, the project could be important in encouraging basin residents to follow through on their plan to secure federal funding to further reduce water shortages that have destabilized the local economy.

#### RECOMMENDATIONS:

A grant of up to \$300,000 is recommended contingent upon the following.

1. DNRC must approve the project scope of work and budget.
2. The association must designate a suitable public entity to receive and administer the grant funds.
3. The association must secure the remainder of project funding.

- 3 -

APPLICANT NAME: Judith Basin Conservation District

PROJECT/ACTIVITY NAME: Community-Led Rural Development in Montana

AMOUNT REQUESTED: \$ 291,950

#### OTHER FUNDING SOURCES AND AMOUNTS:

Conservation Districts Bureau (DNRC)	\$ 79,300
U.S. Forest Service	\$ 47,000
Applicant	\$ 211,271

TOTAL PROJECT COST: \$ 629,521



## PROJECT DESCRIPTION:

According to *Eye on Business* (Montana Chamber of Commerce, Volume 19, No. 1, January 1990), in 1989 Montana's economy placed 47th in both personal income growth and diversification of its resource base into value-added products. Another source, *Outlook--Entering the 1990s* (University of Montana, Bureau of Business and Economic Research, Winter 1990), indicates the state's population has declined from 825,000 to 806,000 between 1985 and 1989. Overall, personal income in Montana was stable in the 1980s, while throughout the nation personal income increased during the same period. Montana's nonfarm labor income steadily declined between 1979 and 1989. In 1988 per capita income in Montana fell to 78 percent of the national average. The applicant proposes, therefore, that a locally based method to stimulate regional economies is needed in Montana.

The purpose of this proposal is to implement a statewide community-led rural development effort through the organization and development of four new Resource Conservation and Development (RC&D) areas. RC&Ds are regional organizations made up of representatives from local governments and conservation districts. Their primary goal is to help people conserve, develop, and utilize natural resources. RC&Ds are concerned about economic benefits and the social well-being of all people in their area. RC&Ds operate from a management plan that is continually updated to meet local needs. They work in areas of natural resource management, economic development, community development, and human development.

This program would provide an opportunity for local governments and citizens to solve local economic problems. These new organizations would also provide a mechanism for receiving federal, state, and private economic development assistance. Specifically, RC&Ds have helped to develop irrigation districts, organize forestry and weed projects, reclaim areas damaged by mineral development, plan water reservations, and develop community parks and centers.

The RC&D community-led approach includes three phases: (1) community-led workshops for education, economic planning, and ensuring local city and county commitment to the entire economic development effort; (2) organization of RC&D areas; and (3) start-up operation of RC&D areas. This grant would be used for phase three in four new RC&D areas: Central Montana (Fergus, Golden Valley, Judith Basin, Musselshell, Petroleum, and Wheatland Counties); Eastern Montana (Carter, Custer, Daniels, Dawson, Fallon, Garfield, McCone, Powder River, Prairie, Richland, Roosevelt, Rosebud, Sheridan, Treasure, Valley, and Wibaux Counties); Northwest Montana (Flathead, Lake, Lincoln, and

Sanders Counties); and Northern Montana (Blaine, Cascade, Chouteau, Glacier, Hill, Liberty, Phillips, Pondera, Teton, and Toole Counties).

#### TECHNICAL ASSESSMENT:

The poor health of Montana's economy is well described. The methodology for setting up the new RC&Ds is well laid out. Since this is a proposal to establish new RC&D areas, specific projects to be undertaken by the new RC&Ds are not outlined. The application discusses the success of the Headwaters RC&D's efforts serving Anaconda/Deer Lodge, Beaverhead, Broadwater, Butte/Silver Bow, Granite, Jefferson, Madison, and Powell Counties. Headwaters RC&D would be used as an organizational model for the four new RC&Ds. The Headwaters RC&D has provided a mechanism for galvanizing and bringing new ideas to fruition. It has been very effective at helping to bring grant dollars to the area and focusing agency assistance.

The proposed Eastern Montana RC&D Area has gotten underway in the last 18 months. The first phase (training workshops) has already been completed. The area is in great need of a full-time coordinator to continue the present impetus and enthusiasm. The Central Montana RC&D Area received \$79,000 from the 1989 legislature; an additional \$40,000 will tide it over until federal RC&D funding is approved. The Northwest RC&D Area received \$67,000 from the U.S. Forest Service to explore economic development options. The requested funds will allow the RC&D to continue with research of potential economic development projects. The Northern RC&D effort has just begun and has not yet conducted the first phase to ensure local city and county commitment to the entire economic development effort.

#### FINANCIAL ASSESSMENT:

The budget is well documented and appears reasonable. The budget breakdown is listed below.

Salaries and wages	\$119,156
Employee benefits	44,294
Supplies and materials	21,500
Communications	24,000
Travel	48,000
Equipment	<u>35,000</u>

TOTAL	\$291,950
-------	-----------

Basically, the applicant is requesting funding for two new RC&D coordinators for the Eastern and Northern areas, fringe benefits for all four RC&D coordinators, and supplies, materials, communications, travel, and rent for all four RC&D offices.



### ENVIRONMENTAL EVALUATION:

This project will not directly degrade the environment since it only involves the establishment of RC&D areas. Environmental effects will depend on the type of projects undertaken by the RC&Ds. An RC&D's primary goal is to aid in the conservation, development, and utilization of natural resources. Projects to conserve resources would result in beneficial effects on the environment. Conversely, natural resource development and utilization projects could have adverse environmental effects, but these will be governed by the Montana Environmental Policy Act.

### PUBLIC BENEFITS ASSESSMENT:

This proposal, if successfully implemented, has the potential to improve and enhance people's lives throughout Montana by bolstering and diversifying the economy. RC&Ds are concerned about both economic benefits and social well-being of residents in their areas. RC&Ds have helped to develop flood control projects, develop community centers and parks, establish new businesses, market new inventions, and meet community needs with educational programs.

### RECOMMENDATIONS:

Counties and conservation districts included in the newly formed RC&D areas will act as sponsors. DNRC recommends that each sponsor contribute matching funds for annual RC&D operations. Initial training needs for new RC&D coordinators were not addressed in the budget. A portion of the travel budget should be used to send coordinators to regional and national training programs on rural community economic development.

A grant of up to \$170,000 is recommended for this project with the following contingencies.

1. DNRC must approve the project scope of work and budget for each RC&D area.
2. Adequate reporting from each RC&D area will be required to ascertain RC&D effectiveness.
3. DNRC will require a management plan for funds disbursement and grant administration at each RC&D office.



APPLICANT NAME: Montana Department of Health and  
Environmental Sciences (DHES) and  
Central Montana Health District

PROJECT/ACTIVITY NAME: Arro Refinery Sludge Cleanup

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 15,000

TOTAL PROJECT COST: \$ 315,000

PROJECT DESCRIPTION:

The Central Montana Health District and the Montana Department of Health and Environmental Sciences are applying for a grant to clean up two sludge pits at the Arro Oil Refinery in Lewistown, Montana. This is an abandoned oil refinery 4 miles northwest of Lewistown that operated from the 1920s to the 1940s. The company dismantled the refinery and has since dissolved. Research indicates no viable parties exist that could be held responsible for cleanup of the site. The sludge pits encompass about 5,320 square feet. The refinery site covers approximately 40 acres. Six residences and pastureland are located on the site.

DHES and the U.S. Environmental Protection Agency (EPA) have conducted investigations of contamination problems at the site. Those investigations indicated that: (1) the shallow groundwater is contaminated with petroleum hydrocarbons, (2) soils near and below the old tetraethyl lead plant are contaminated with lead, (3) on-site pits contain approximately 1,000 cubic yards (yd<sup>3</sup>) of sludge containing hazardous substances, and (4) approximately 15,000 yd<sup>3</sup> of on-site subsurface soils are contaminated with petroleum hydrocarbons. These remedial investigations and removal/cleanup of lead-contaminated soils were funded in part by a 1987 RDGP grant (\$300,000).

The purpose of this grant project is to clean up two sludge pits at the Arro site, eliminating potential health and environmental risks. The sludge presents a health hazard to humans who may accidentally come into direct contact with and/or who inhale hazardous vapors volatilized from the sludge. Site access is currently unrestricted; small children or animals may become trapped in the pits. There are carcasses of dead birds and domestic animals already in the large pit. The residents occupying the site have complained of pungent odors during the

warmer months of the year, which indicates they are likely inhaling volatile hazardous substances. The underlying shallow aquifer and soils are already contaminated with the same hazardous substances found in the sludge. The sludge presents an environmental risk because it is a potential source of contamination for an adjacent stream and deep aquifer.

Cleanup would be accomplished in three phases. (1) The feasibility study stage includes conducting a detailed cost-effectiveness evaluation of remedial alternatives and selecting the preferred alternative. This phase also includes conducting any needed lab and field treatability studies. (2) The remedial design stage includes preparing bid specifications and construction plans. (3) The cleanup phase includes soliciting bids, awarding the cleanup contract, and executing the cleanup plan.

The primary objective of remedial activities at the sludge pits is to eliminate the risk of human physical contact and exposure. The secondary objective is to remove the source of environmental contamination and prevent further degradation of groundwater, surface water, and air quality. The grant project would be limited to cleaning up the sludge pits only.

The technologies evaluated centered around removing the liquid and dry sludge from the exposed pits. After removing or stabilizing all usable sludge, clean fill (preferably clay) would be placed in the excavation. Top soil would be placed over the fill and seeded. DHES has proposed 10 possible alternatives to dispose of or find a productive use for the removed material; these alternatives are listed below.

1. Transport the sludge to an industrial facility to be used as fuel.
2. Incinerate the sludge off-site or on-site using a mobile incinerator.
3. Recycle and/or refine the sludge.
4. Use the sludge in road construction.
5. Separate the sludge waste into oil, water, and solid fractions by means of a solvent.
6. Biodegrade the sludge and contaminated soils.
7. Use in situ vitrification (a thermal treatment process that converts contaminated soils into a chemically inert and stable glass by means of heat generated by an electric current).
8. Wash the fine suspended clays from the sludge, through a six-step process, using a hot water extraction method.
9. Stabilize the organic wastes by mixing in a mineral agent.
10. Use a white rot fungi to break down and destroy the sludge hydrocarbons.

## TECHNICAL ASSESSMENT:

Technical review of this project was favorable. The applicant has thoroughly researched the alternatives and discussed these with the potential contractors. The current preferred alternative is to recycle and/or refine the sludge. This is the most inexpensive and desirable alternative because the sludge would be reused. The proposal represents a logical and necessary strategy for cleanup of the sludge material.

## FINANCIAL ASSESSMENT:

All grant funds would be used strictly for contracted services (i.e., for the cleanup contractor, treatability studies, and oversight consultant). Any costs incurred by the applicants, such as salary, travel, and equipment, would be donated as an in-kind match. Administrative costs were not included in the budget since grant funds would not be used to cover them.

Because the final cleanup alternative has not been selected, a detailed breakdown of contractor expenses was not provided. Estimated total project costs are shown below.

### Cleanup contractor costs

Sludge removal	\$ 20,000
Sludge recycling/cleanup	250,000
Soil replacement and revegetation	5,000

### Oversight consultant costs

Cleanup plan development	5,000
Cleanup oversight and final report	<u>35,000</u>

TOTAL	\$ 315,000
-------	------------

DHES has obtained estimates from contractors where possible. Generally the budget is adequately documented, realistic, and economically feasible. EPA conducted a site investigation and collected data required to rank the site to determine if it qualified for Superfund money. The site's hazardous ranking score was not high enough to qualify for EPA Superfund money. The State Comprehensive Environmental Cleanup and Responsibility Act (CECRA) program does not have adequate funds to address this problem.

## ENVIRONMENTAL EVALUATION:

Examination of each of the 10 alternatives proposed for the sludge cleanup is ongoing. The alternative selected would comply with applicable environmental standards and regulations. Contaminated soils would be replaced with clean soils, having a beneficial effect in the cleanup area. Water and air quality



would be improved, since a source of contamination to streams, groundwater, and air would be removed. Also, the site would be revegetated and could be returned to productive agricultural land. No long-term negative impacts are anticipated.

PUBLIC BENEFITS ASSESSMENT:

Six residences and pastureland are currently located on the site. The two sludge pits are currently unrestricted, but elimination of the pits would remove the threat to children, livestock, and wildlife that may become trapped in the pits. Cleanup of the pits would eliminate the threats of (1) hazardous wastes entering surface water and groundwater, and (2) residents inhaling hazardous substances. Some of the wastes have been identified as carcinogens.

Over 10 abandoned refineries in the state of Montana have sludge pits similar to those at the Arro Refinery site. Cleanup procedures and technologies developed for this project could assist with cleanup of the other refinery sites as well as other sites contaminated with petroleum hydrocarbons, offering potential statewide benefits.

RECOMMENDATIONS:

A grant of up to \$300,000 is recommended contingent on DNRC approval of the project scope of work and budget.

- 5 -

APPLICANT NAME: Montana Board of Oil and Gas  
Conservation

PROJECT/ACTIVITY NAME: Abandoned Well Plugging Project "A"

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 6,000

TOTAL PROJECT COST: \$ 306,000

PROJECT DESCRIPTION:

This project addresses a statewide need to reduce the potential adverse impacts of improperly abandoned wells on the water resources, land use, and mineral values of the state. The project reflects the ongoing concern for potential point source degradation of groundwater.

In September 1989 the Board of Oil and Gas Conservation (Board) contracted with the Department of Natural Resources and Conservation's Resource Development Bureau to conduct a search and examination of Board files and electronic databases. The purpose was to compile a list of pre-law (1954) oil and gas wells in need of on-site inspection. Grant applications to the Reclamation and Development Grants Program (RDGP) would be developed to properly abandon those wells that pose the most severe environmental and/or public health hazards.

Several thousand old wells (pre-1954) are in need of field checks. The Board has submitted three applications for RDGP grant funding. In terms of priority the Board rates this proposal over Abandoned Well Plugging Projects "B" and "C" (found elsewhere in this book). Priority was assigned after field inspection and based on the likelihood that a particular well could cause severe groundwater or surface water contamination if left unplugged. The Board has indicated that there is no liable or responsible party for the proposed plugging and surface cleanup.

The proposed project involves the surface preparation of four well-sites, the moving in and rigging up of an appropriately sized drilling or workover rig, the re-entry and drilling or cleaning out of each well to a depth necessary to control any water or hydrocarbon flow, and the setting of cement plugs in the hole or the setting of cast iron bridge plugs in cased portions of the wells. Upon completion of the well work, the surface would be cleaned of debris and drilling materials, pits backfilled and leveled, and the entire area recontoured if necessary. Revegetation of the disturbed area would be accomplished, utilizing seed mixtures appropriate for the area and satisfactory to the landowner.

#### TECHNICAL ASSESSMENT:

The names and locations of the four wells are:

- |                 |   |
|-----------------|---|
| 1. #1 Van Dusen | Section 29, T8N, R21E<br>Golden Valley County |
| 2. Mitchell #5  | Section 21, T15N, R30E<br>Petroleum County    |
| 3. Haskell #1   | Section 4, T14N, R55E<br>Dawson County        |
| 4. Well #2      | Section 26, T8N, R21E<br>Golden Valley County |

All of the wells listed under this proposed project should be properly abandoned and surface reclamation accomplished as soon as possible. These wells have likely been creating surface



problems and potentially severe groundwater damage for a relatively long period.

The project's final results would be evaluated using the same criteria applied to an oil and gas operator's abandonment operations. To be considered successful, the well must be left in a stable condition downhole, with mechanical or cement plugs preventing fluid migration between porous zones. The surface must be recontoured and revegetated in such a manner that the original contours are approximated to the extent possible and suitable vegetation reestablished to prevent erosion.

#### FINANCIAL ASSESSMENT:

Each individual well under the project would be scheduled for plugging in the order listed. Generally the wells would be treated separately for project administration purposes, with the remaining unused funds available for the next well on the list following successful plugging of the preceding well(s). While the time allotted for plugging operations is relatively short (e.g., five to ten days), the surface restoration, including revegetation, would be likely to take at least one growing season before a final release of the site could be done.

The costs of plugging are based on the estimated time to plug, the cost of plugging materials, and the cost of dirt work done in preparation for re-entry of the well and restoration of the location upon completion of the project. Third party services, including trucking of water and materials, logging or other wireline services, and renting specialized equipment, such as fishing tools, are also included in the estimate.

While the well plugging projects would generally be undertaken in the order listed, some flexibility to change priorities is needed as well-bore conditions occasionally change dramatically. In some instances it may be necessary to substitute a newly discovered problem well in lieu of or ahead of a well already on the project list. This change in priority may be dictated by the potential for surface water or (especially) groundwater damage; wells would be prioritized based upon the estimated severity of damage likely to occur if the well is left unplugged. In some cases cost estimates may prove inaccurate by the time the well work is scheduled; there is no guarantee that all of the wells listed can be plugged for a cost at or under the maximum approved funding.

As the Board has done in the past, it would use qualified oil-field contractors to perform the well work involved in this project. Selection of the contractor would be on a bid basis and would comply with the statutory requirements for public projects. The contractor would be under the general supervision of the Board's staff, including its petroleum engineer, petroleum

geologist, and environmental coordinator. The Board's chief field inspector would be the overall project manager. The field inspector responsible for the area in which the well is located would be the full-time supervisor assigned to each project well during active drilling operations.

The estimated total cost of \$306,000 is reasonable for the level of work described.

#### ENVIRONMENTAL EVALUATION:

The proposed project is intended to provide a substantial positive environmental impact; there would be minor, short-term impacts associated with the project. The principal impact would be the short-term impact to air quality due to emissions from rig engines and dust and noise from traffic and dirt work involved in moving equipment to and from the location and in operations. It is anticipated that beneficial impacts would far outweigh any short-term adverse impacts. Non-implementation of this project would permit groundwater contamination to remain unabated.

#### PUBLIC BENEFITS ASSESSMENT:

The greatest public benefit to be achieved in virtually every case would be the elimination of potentially severe groundwater contamination by non-potable water, lower quality water, or possibly hydrocarbons from deeper formations. In some cases potentially commercial mineral-bearing zones (including oil and gas zones) may be protected from damage by extraneous water and hydrocarbons.

#### RECOMMENDATIONS:

A grant of up to \$300,000 is recommended for this project contingent upon DNRC approval of the project scope of work and budget. For any wells substituted for the ones listed, the Board must determine that there is no responsible party and submit this determination in writing to DNRC. This requirement shall be met prior to contractor selection.

With the exception of the Board's Abandoned Well Plugging Project "B" and Abandoned Well Plugging Project "C" (found elsewhere in this book), this recommendation assumes that the Board does not receive additional RDGP or RIT funds from the 1991 legislature to plug and restore abandoned well sites. To the extent that the Board receives funds directly from the legislature for these activities, grant funds will be reduced on a dollar-for-dollar basis.



APPLICANT NAME: Montana Board of Oil and Gas  
Conservation

PROJECT/ACTIVITY NAME: Abandoned Well Plugging Project "B"

AMOUNT REQUESTED: \$ 295,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 6,000
-----------	----------

TOTAL PROJECT COST: \$ 301,000

PROJECT DESCRIPTION:

This project addresses a statewide need to reduce the potential adverse impacts of improperly abandoned wells on the water resources, land use, and mineral values of the state. The project reflects the ongoing concern for potential point source degradation of groundwater.

In September 1989 the Board of Oil and Gas Conservation (Board) contracted with the Department of Natural Resources and Conservation's Resource Development Bureau to conduct a search and examination of Board files and electronic databases. The purpose was to compile a list of pre-law (1954) oil and gas wells in need of on-site inspection. Grant applications to the Reclamation and Development Grants Program (RDGP) would be developed to properly abandon those wells that pose the most severe environmental and/or public health hazards.

Several thousand old wells (pre-1954) are in need of field checks. The Board has submitted three applications for RDGP grant funding. In terms of priority the Board rates this proposal higher than Abandoned Well Plugging Project "C" and lower than Abandoned Well Plugging Project "A" (found elsewhere in this book). Priority was assigned after field inspection and based on the likelihood that a particular well could cause severe groundwater or surface water contamination if left unplugged. The Board has indicated that there is no liable or responsible party for the proposed plugging and surface cleanup.

The proposed project involves the surface preparation of three well-sites, the moving in and rigging up of an appropriately sized drilling or workover rig, the re-entry and drilling or cleaning out of each well to a depth necessary to control any water or hydrocarbon flow, and the setting of cement plugs in the hole or the setting of cast iron bridge plugs in cased portions of the wells. Upon completion of the well work, the surface would be cleaned of debris and drilling materials,

pits backfilled and leveled, and the entire area recontoured if necessary. Revegetation of the disturbed area would be accomplished, utilizing seed mixtures appropriate for the area and satisfactory to the landowner.

#### TECHNICAL ASSESSMENT:

The wells and their locations are:

- |                 |   |
|-----------------|---|
| 1. Well #2      | Section 6, T25N, R24E<br>Yellowstone County   |
| 2. Well #3      | Section 21, T8N, R21E<br>Golden Valley County |
| 3. No Well Name | Section 21, T15N, R30E<br>Petroleum County    |

All of the wells listed under this proposed project should be properly abandoned and surface reclamation accomplished as soon as possible. These wells have likely been creating surface water problems and potential groundwater damage for a relatively long time.

The project's final results would be evaluated using the same criteria applied to an oil and gas operator's abandonment operations. To be considered successful, the well must be left in a stable condition downhole, with mechanical or cement plugs preventing fluid migration between porous zones. The surface must be recontoured and revegetated in such a manner that the original contours are approximated to the extent possible and suitable vegetation reestablished to prevent erosion.

#### FINANCIAL ASSESSMENT:

Each individual well under the project would be scheduled for plugging in the order listed. Generally the wells would be treated separately for project administration purposes, with the remaining unused funds available for the next well on the list following successful plugging of the preceding well(s). While the time allotted for plugging operations is relatively short (e.g., five to ten days), the surface restoration, including revegetation, would be likely to take at least one growing season before a final release of the site could be done.

The costs of plugging are based on the estimated time to plug, the cost of plugging materials, and the cost of dirt work done in preparation for re-entry of the well and restoration of the location upon completion of the project. Third party services, including trucking of water and materials, logging or other wireline services, and renting specialized equipment, such as fishing tools, are also included in the estimate.



While the well plugging projects would generally be undertaken in the order listed, some flexibility to change priorities is needed as well-bore conditions occasionally change dramatically. In some instances it may be necessary to substitute a newly discovered problem well in lieu of or ahead of a well already on the project list. This change in priority may be dictated by the potential for surface water or (especially) groundwater damage; wells would be prioritized based upon the estimated severity of damage likely to occur if the well is left unplugged. In some cases cost estimates may prove inaccurate by the time the well work is scheduled; there is no guarantee that all of the wells listed can be plugged for a cost at or under the maximum approved funding.

As the Board has done in the past, it would use qualified oil-field contractors to perform the well work involved in this project. Selection of the contractor would be on a bid basis and would comply with the statutory requirements for public projects. The contractor would be under the general supervision of the Board's staff, including its petroleum engineer, petroleum geologist, and environmental coordinator. The Board's chief field inspector would be the overall project manager. The field inspector responsible for the area in which the well is located would be the full-time supervisor assigned to each project well during active drilling operations.

The estimated total cost of \$301,000 is reasonable for the level of work described.

#### ENVIRONMENTAL EVALUATION:

The proposed project is intended to provide a substantial positive environmental impact. There would be minor, short-term impacts associated with the project. The principal impact would be the short-term impact to air quality due to emissions from rig engines and dust and noise from traffic and dirt work involved in moving equipment to and from the location and in operations. It is anticipated that beneficial impacts would far outweigh any short-term adverse impacts. Non-implementation of this project would permit groundwater contamination to remain unabated.

#### PUBLIC BENEFITS ASSESSMENT:

The greatest public benefit to be achieved in virtually every case would be the elimination of potentially severe groundwater contamination by non-potable water, lower quality water, or possibly hydrocarbons from deeper formations. In some cases potentially commercial mineral-bearing zones (including oil and gas zones) may be protected from damage by extraneous water and hydrocarbons.

## RECOMMENDATIONS:

A grant of up to \$295,000 is recommended for this project, contingent upon DNRC approval of the project scope of work and budget. For any wells substituted for the ones listed, the Board must determine that there is no responsible party and submit this determination in writing to DNRC. This requirement shall be met prior to contractor selection.

With the exception of the Board's Abandoned Well Plugging Project "A" and Abandoned Well Plugging Project "C" (found elsewhere in this book), this recommendation assumes that the Board does not receive additional RDGP or RIT funds from the 1991 legislature to plug and restore abandoned well sites. To the extent that the Board receives funds directly from the legislature for these activities, grant funds will be reduced on a dollar-for-dollar basis.

- 7 -

APPLICANT NAME: Montana State Library

PROJECT/ACTIVITY NAME: NRIS Program--Emphasis on the Natural Heritage Program and Geographic Information System (GIS)

AMOUNT REQUESTED: \$ 227,600

### OTHER FUNDING SOURCES AND AMOUNTS:

Renewable Resource Development Program (RRD), DNRC	\$ 199,626 (two grants)
Department of Fish, Wildlife and Parks (DFWP)	\$ 50,000
Department of State Lands (DSL) and Office of Surface Mining (OSM)	\$ 30,000

TOTAL PROJECT COST: \$ 507,226

### PROJECT DESCRIPTION:

The Montana Natural Resource Information System (NRIS) was created by the legislature in 1985 to improve statewide efforts to manage a growing amount of natural resource data and make existing data sources more accessible. NRIS is designed to ensure the best information is quickly at hand for critical decisions. NRIS has made good progress in meeting the legislative mandate of helping to avoid increasing data collection and management costs, providing assistance in making information technology choices, and aiding data managers hoping



to share information with different departments and public and private data users. This program has provided an increased understanding of the state's natural resources and an increased ability to apply this knowledge to the conservation, management, utilization, development, and preservation of the state's vital resources.

NRIS has organized its efforts into four major components. The **Montana Natural Heritage Program (NHP)** is a comprehensive, computer-assisted inventory of Montana's biological resources, emphasizing rare, threatened, or endangered plant and animal species and biological communities. In 1990 the Heritage Program has more than 5,000 records in its databases and has been instrumental in land management decision making. The program facilitates economic development, even in environmentally sensitive areas, without causing irreparable damage. The **Montana Water Information System (MWIS)** provides a starting point for locating water resource information that is contained in the records of several agencies. MWIS is a central contact point for statewide data on surface water, groundwater, water quality, riparian areas, climatic data, and on-line interconnection with all major federal water-related databases. The **Montana Geographic Information System (GIS)** provides services and technical assistance for statewide GIS projects and to agencies developing in-house GIS capability. NRIS inventories data available for GIS applications, maintains a computerized directory of this data, and coordinates GIS data standards and sharing throughout the state. The **Montana Natural Resource Index (NRI)** is a geographical and subject area indexing system for existing data sources, including almost 10,000 references to both published and unpublished documents related to natural resource data sources.

Proposed tasks for NRIS are listed below. NRIS requests funds and support for all tasks listed (1 through 9), with primary emphasis on managing and operating the Natural Heritage Program (Task 4), managing and operating the data clearinghouse and response services (Task 5), and developing the GIS (Task 7).

1. Participate in the design and development of uniform, accessible, statewide databases for each of Montana's natural resources
2. Maintain and continue to develop the natural resource index
3. Maintain, refine, and continue to operate the MWIS in cooperation with DNRC
4. Administer the development and operation of the Natural Heritage Program
5. Manage a timely, cost-effective clearinghouse and referral service to link users with the best sources of information

6. Negotiate at least three cooperative agreements with state and federal agencies to secure support for project goals and provide specific data management services consistent with project goals
7. Participate in the design and development of a GIS to serve state needs, promote coordination among Montana state and federal agencies in developing their own GISs, and provide GIS training programs for natural resource personnel
8. Market and promote the use of NRIS and its four main projects
9. Evaluate the programs on an ongoing basis and produce status reports as requested and as specified in various contracts

#### TECHNICAL ASSESSMENT:

The proposal is well defined. The past success of NRIS can be attributed to two main reasons. First, the program is housed in the Montana State Library, which provides a "neutral corner" to disseminate sometimes controversial information without bias. Second, NRIS decided against the traditional, centralized database approach where users are tied into a single system. The centralized databases are costly and very complex to operate. Instead, NRIS provides a central access point to decentralized data sources, a kind of road map to identify important data sources and easy access. This strategy has enabled each resource agency to manage its own data while allowing for maximum data sharing among participating users. NRIS has often been a critical tool in the management of Montana's natural resources.

#### FINANCIAL ASSESSMENT:

The total 1992-1993 biennium budget for the entire NRIS program is \$1,187,413, including several task-specific, service contracts for state and federal agencies. Core operating funds to address the scope of work outlined for this grant are projected at \$507,226, of which \$227,600 would be derived from this RDGP grant and spent as shown below.

Salaries	\$ 65,000
Benefits	15,600
Contracted services	136,000
Supplies and materials	1,000
Communications	1,000
Travel	1,000
Rent	1,000
Repair and maintenance	1,000
Other	1,000
Equipment	<u>5,000</u>
 TOTAL	 \$ 227,600



Since 1985, the legislature has awarded \$601,138 in RDGP grants to NRIS for various programs. The RDGP is not intended to be a continuous source of funding for long-term projects or programs more appropriately funded through the state budget process (ARM 36.19.105). In light of this, NRIS has pursued several alternatives for a permanent source of funding. The Governor's Office of Budget and Program Planning (OBPP) has recommended a direct appropriation of \$377,000 from the RIT account (FY 92-93). Also, it was recommended that NRIS receive \$100,000 rather than \$50,000 from DFWP. No change was recommended in the \$30,000 grant from DSL/OSM. The OBPP recommended changes meet the \$507,226 needed for NRIS core programs. NRIS plans on withdrawing the RDGP and two RRD grant applications if it receives the entire \$377,000 direct appropriation.

#### ENVIRONMENTAL EVALUATION:

The proposed project is designed to provide for the long-term management and compilation of information on natural resources on behalf of public and private users. Significant positive impacts are expected to result from the project because of an increased understanding of the state's renewable resources and an increased ability to apply this knowledge to the conservation, management, utilization, development, and preservation of the water, land, vegetation, fish, wildlife, recreational, and other renewable resources in the state. In particular, the project would have the effect of reducing environmental impacts of future natural resource projects statewide.

#### PUBLIC BENEFITS ASSESSMENT:

The primary benefit of this project is that it would improve access to natural resource data. Accurate, reliable, and adequate natural resource information improves the planning and implementing of development activities that may affect natural resources. This program is accessible to all citizens of Montana and includes data from throughout the state. Benefits would be experienced statewide.

#### RECOMMENDATIONS:

A grant of up to \$227,600 is recommended contingent on the following.

1. DNRC must approve a detailed scope of work and budget.
2. OBPP has recommended a \$377,000 direct RIT appropriation, \$100,000 from DFWP, and \$30,000 from DSL/OSM. If the full \$377,000 direct RIT appropriation is received, the NRIS request for the RDGP and two RRD

grants will be withdrawn completely. If less than \$377,000 is received, any funding shortfall will be made up first by the RRD grants, and then by the RDGP grant. If the recommended DFWP or DSL/OSM appropriations are reduced, the RRD or RDGP grants will not be used to make up for this shortfall.

-8-

APPLICANT NAME: Montana Salinity Control Association (MSCA)

PROJECT/ACTIVITY NAME: Soil and Water Nonpoint Source Pollution Control and Management

AMOUNT REQUESTED: \$ 275,000 (1993-1994 biennium)

OTHER FUNDING SOURCES AND AMOUNTS:

Conservation Districts Bureau, DNRC (1993-1994 biennium)	\$ 200,000
Landowner contributions (estimated)	\$ 125,750

TOTAL PROJECT COST: \$ 600,750

PROJECT DESCRIPTION:

The Montana Salinity Control Association (MSCA), formed in 1985, represents 33 central and eastern Montana counties. A six-member executive board provides supervision and local input to the MSCA field staff. MSCA's principal goals are agricultural nonpoint source pollution (NPSP) prevention, reclamation, and education, along with improvement of agricultural productivity, soil, fauna, and water quality. Educational efforts focus on soil and water conservation practices that benefit the environment, agriculture, fish, wildlife, and the citizens of Montana, as well as surrounding states and Canada.

The MSCA interdisciplinary technical field team has developed a proven reclamation technique utilizing alternatives to summer fallow cropping. The team works on a farm-by-farm basis using hydrogeologic site characterization, recharge area identification, and soil and water quality sampling and monitoring. Emphasis is placed on intensive and alternative cropping systems.

MSCA is requesting funding to initiate fieldwork and planning for 40 new projects. To date, MSCA has completed 319 reclamation plans encompassing 75,000 acres. The average cost

per acre for a reclamation plan was \$112 in 1990. Approximately 35 applications for assistance are currently on file, and new applications are continually being generated. These applications represent a range of entities, including individual farmers, the U.S. Fish and Wildlife Service's Benton Lake Wildlife Refuge near Great Falls, and the City of Havre. Havre requested assistance from MSCA to control and reclaim saline soils, groundwater, and surface water, because they are impacting the business community, fairgrounds, and private land on the west edge of town.

#### TECHNICAL ASSESSMENT:

The methods to reduce saline seep are sound, well documented, and supported by professionals in this field. MSCA's efforts have been successful in publicizing the causes and costs of saline seep in Montana. MSCA provides a useful service to the public, and the proposal is a legitimate part of Montana's nonpoint source pollution abatement program.

According to MSCA, the reclamation plan implementation rate is 85 percent. The reasons this rate is not higher may be that the solution is labor-intensive, too expensive for some farmers, and requires long-term attention to prevent future seeps. In addition, the alternative agricultural practices used in reclamation result in forage products that are not currently as marketable as the cereal grain crops generally grown in these areas.

#### FINANCIAL ASSESSMENT:

The breakdown of the RDGP budget request for the proposed fiscal years 1993-1994 is listed below.

Salaries and wages	\$ 100,000
Fringe benefits	10,000
Contracted services	4,000
Supplies and materials	40,000
Communications	10,000
Travel	5,500
Rent and utilities	7,000
Equipment	64,500
Miscellaneous	<u>34,000</u>
TOTAL	\$ 275,000

Expenditures for supplies and materials include well construction materials, vehicle repairs and operations, and office supplies and repairs. Equipment expenditures include a 4x4 pickup, lap top computer, plotter, image recorder (to make slides from computer graphics), Fax machine, computer software, soil sampling and analysis equipment, well sampling kit, 10 water level recorders, survey equipment, office furniture, and well



construction equipment. Educational materials (displays, tours, video, and bulletins) and insurance comprise the miscellaneous expenses.

The state is asked to contribute 79 percent of the total budget, or 46 percent from RDGP and 33 percent from the Conservation Districts Bureau. RDGP rules state that RDGP is not intended to be a continuous source of funding for costs of long-term projects or programs more appropriately funded through the state budget process (ARM 36.19.105). It is important that MSCA not become too dependent on the grants and move toward becoming more self-sustaining.

MSCA has received three RDGP grants for nonpoint pollution control since 1985. Since 1988, when the first RDGP contract was written, it has spent \$390,620 of the \$650,000 in approved RDGP funds. As of October 1990, MSCA had \$259,380 remaining to spend in currently allotted RDGP funds. MSCA's present RDGP contract requires 30 percent landowner contributions; it should be noted that MSCA has been conscientious about collecting the required landowner match.

#### ENVIRONMENTAL EVALUATION:

Adverse environmental impacts are not expected to result from this project. The major benefits would be the reclamation and protection of soil and water resources. Improvement of soil resources would result from crop types and rotations that prevent soluble salts and trace minerals from being transported to the upper soil horizon and provide better cover to reduce soil erosion. Water quality would be improved by cropping practices that prevent soluble salts and trace minerals from moving through the soil profile into groundwater and surface water. The perennial crop rotations would also prevent erosion, which would minimize sediment movement to riparian areas. Wildlife would benefit from the increased forage, and aquatic life would profit from the improved water quality.

#### PUBLIC BENEFITS ASSESSMENT:

Private landowners receive the main benefits from this program through increased production and higher returns from reclaimed lands. Statewide public benefits result from soil and water resource improvements.

#### RECOMMENDATIONS:

DNRC recommends that half the requested amount be granted. MSCA has already secured RDGP funding to carry it through the 1991-1992 biennium. The recommended amount will allow MSCA to



continue its present level of operation through fall 1993. The amount recommended will enable MSCA to fund its operations until it can secure a more reliable and permanent source of funding.

A grant of up to \$137,500 is recommended contingent on the following.

1. DNRC must approve the project scope of work and budget.
2. The amount must be matched by landowner contributions of at least \$55,000. This equals 40 percent of the recommended RDGP grant.

- 9 -

APPLICANT NAME: Montana State University (MSU),  
Reclamation Research Unit

PROJECT/ACTIVITY NAME: Effect of Sodium, Chlorine, and Total  
Salts from Treated Cyanide Solutions on  
Soils

AMOUNT REQUESTED: \$ 82,885

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 82,885

PROJECT DESCRIPTION:

Heap leach gold extraction with a dilute cyanide solution is rapidly increasing in Montana because of its cost-effectiveness. Under certain climatic conditions heap leach mines release solutions of treated cyanide or sprinkle irrigate treated solutions on forested or rangeland soils. Concern about potential contamination of groundwater or surface water has led to the requirement that all cyanide wastewater be treated and cyanide concentrations reduced to acceptable levels.

Sodium, a metal not often considered toxic, is the dominant metal in cyanide waste streams. Attenuation of sodium by the receiving soil causes an increase in the SAR (sodium absorption ratio) of the material. Large quantities of ionized chlorine will also be found in the solution following oxidation of cyanide. The elevated sodium levels occur because of additions of the element in the extraction process and in cyanide neutralization. Chlorine occurs as a result of the addition of sodium or calcium hypochlorite in the neutralization process.

The salt loading of soils rises very rapidly on land application disposal areas during evaporation of surface-applied

mine wastewater because of the amount of salts in the barren liquid. These salts are a result of additions of cyanide, sodium hydroxide, and sodium or calcium hypochlorite to the heaps or to the treatment solution. These three problems--sodium, chlorine, and salt loading--are now being viewed with as much, if not greater, relevance than cyanide and toxic heavy metals to the land application discharge system.

Land applications of spent cyanide solution are currently controlled by the Hardrock Bureau of the Department of State Lands (DSL). Sodium, salinity, and chlorine are considered when application rates are being evaluated. Unfortunately, little is known of the rate of sodium attenuation, salinity buildup, or chlorine accumulation in soils receiving treated cyanide solutions. Data to help the state regulatory agency set appropriate guidelines are becoming more important with each new precious metal mine permit application.

MSU proposes to evaluate sodium attenuation, salinity buildup, and chlorine accumulation in mine site soils in the laboratory and field. Soil columns would be constructed in the laboratory and field sites instrumented to evaluate treated cyanide solution irrigation upon these three parameters.

Two mine sites would be selected in collaboration with the Hardrock Bureau and mine managers. Soils selected for study would be located in areas designated in the mine permit as land application disposal areas.

#### TECHNICAL ASSESSMENT:

Sodium is the most common metal in treated waters from cyanide heap leach operations. This metal is derived not from the gold ore but from sodium hypochlorite used to neutralize cyanide and sodium hydroxide added to the neutralizing solution to keep the pH high and prevent the formation of poisonous cyanide gas. Exchangeable sodium percentages are not considered harmful until they reach 10 or 12, but any value above 4 or 5 restricts the number of plant species that will develop and reproduce in a soil. Sodic soils have an excess of exchangeable and soluble sodium which tends to disperse the clay system, resulting in a general loss of soil structure. Such degradation of the soil structure can decrease water infiltration and permeability rates, thereby increasing overland flow and surface erosion. Sodic conditions not only retard seedling establishment, root penetration, and plant growth in general, but also limit the kinds of plants that can be established. Also, direct sodium toxicity may be a problem for sensitive species.

Chlorine is also derived from the hypochlorite and can be as toxic to fish as cyanide. Since 6.8 mg of chlorine are required to completely oxidize one milligram of cyanide and chlorine will



not break down, concentrations of this element in discharge water may be very high. Irrigation water with chlorine concentrations over 500 mg/l is injurious to sensitive species and will tend to exacerbate the salt buildup problem. This element may be present in barren solutions at much greater concentrations than 500 mg/l and pose a greater problem than previously anticipated in land application systems.

Cyanide, metallo-cyanide complexes, calcium or sodium hypochlorite, and sodium hydroxide are added to or result from the addition of other soluble salts to the cyanide solution. These chemical compounds and ions accumulate in the barren liquor. When the solution is applied to soil surfaces, all dissolved salts remain after evaporation of the water. Loading of the soil and its surface organic layer (in forested mountain soils) with anions and cations causes an increase in the EC (electrical conductivity) of the soil. These conductivities may reach levels inhibitory to plant growth and development before toxic metal levels are measurably elevated. Most Montana forest vegetation is salt sensitive, and soils reveal conductivity levels below 1 dS/m. By agricultural standards, soils with an EC greater than 4 dS/m retard plant growth. Actually, salt sensitive plants may be affected at conductivities much less than 4 dS/m.

Mine company data and accidental spills have shown that exchangeable sodium percentages (ESPs), chlorine concentrations, and salinity are all high in land application discharge area soils. No research has been found, however, that addresses these phenomena at heap leach operations.

As long as cyanide heap leach gold extraction continues in Montana, controlled land applications will be needed for the disposal of spent cyanide solutions or excess water containing cyanide. These two actions, heap leaching and disposal of excess solutions, need not conflict with environmental concerns, but regulatory agencies (DSL, Hardrock Bureau) must have data to guide their permitting actions if they are to prevent conflicts. At the present time, regulators must assume a worst case scenario with respect to increasing soil ESP, chlorine, and EC at land application areas. Additional information about these three parameters will help prevent environmental degradation and may permit more liberal land application discharge rates.

There are few alternatives to some sort of research project investigating the impact on soil of sodium, chlorine, and salinity in treated cyanide solutions. Other parameters (i.e., cyanide and heavy metals) have been and are being investigated. It is becoming increasingly apparent that the quantities of sodium, chlorine, and salt in general will become limiting before the two more toxic materials reach levels of concern. Information about cyanide and heavy metals added to soils in

waste solutions will not help define limits to land application discharge systems for sodium, chlorine, and salts.

The proposal represents a logical next step in the investigation of potential impacts to the environment from cyanide heap leach operations.

#### FINANCIAL ASSESSMENT:

The proposed budget includes:

Salaries and benefits	\$ 60,928
Contracted services	12,772
Supplies and materials	1,500
Communications	300
Travel	4,025
Rent and utilities	2,720
Equipment	<u>640</u>
TOTAL	\$ 82,885

Costs appear reasonable for the work to be performed. The lab work would consist of a soil column study in which neutralized cyanide solutions would be leached through three replicates of two different soil types. Water analyses would be conducted on the effluent from each column. Soil analyses would be conducted on samples taken from several levels within each column after leaching.

The field investigation would be conducted at two discharge sites to be selected when grant funds become available. At each site, four soil cores would be collected, and seven samples would be taken from each core, for a total of 56 separate samples. Cores would be taken during four different sampling times, for a subtotal of 224 samples. Adding these to an estimated 26 soil samples taken from the soil columns in the laboratory brings the grand total to 250 soil samples.

All analyses would be carried out in the reclamation research laboratory at MSU. The soil and water analyses before and after discharge of the treated cyanide solution would be used to interpret the effect of land application of cyanide mine waste solutions on the salt, sodium, and chloride content of the two soil types.

#### ENVIRONMENTAL EVALUATION:

This study is not likely to result in adverse impacts to the environment. This impact interpretation would enable the Hardrock Bureau to maximize permitted solution discharges without soil degradation and thus make the gold extraction process more economical. Data in the final report would help the Hardrock



Bureau regulate land applications of treated cyanide solutions, spills, and other permitted and accidental discharges of cyanide at heap leach operations.

Final results would consist of rates of loading for land application disposal sites at two heap leach operations in Montana. Project results would be provided to DSL and DNRC.

#### PUBLIC BENEFITS ASSESSMENT:

Since most of the land involved is public, this project would help ensure that the quality of our public land resource will be maintained for all Montanans. The study would conserve our natural soil resource. Information to be provided by this study would permit the Hardrock Bureau to more accurately predict soil impact resulting from waste cyanide disposal.

The information would also be of value to mine operators. Data on the ability of soils to absorb sodium, chlorine, and salts without reaching levels inhibitory to plant growth would enable the mining industry to more effectively plan land application programs. These data would permit the maximization of discharge with a minimum of environmental damage.

#### RECOMMENDATIONS:

A grant of up to \$82,885 is recommended for this project contingent upon DNRC approval of the project scope of work and budget.

- 10 -

APPLICANT NAME: Carbon County, Stillwater County, and the City of Big Timber

PROJECT/ACTIVITY NAME: Integrated Waste Management in Southcentral Montana

AMOUNT REQUESTED: \$ 121,587

#### OTHER FUNDING SOURCES AND AMOUNTS:

Applicants	\$ 32,700
Soil Conservation Service (SCS),	\$ 45,049
Beartooth RC&D, Keep Montana	
Clean and Beautiful, Midwest	
Assistance Program, and	
Billings Recycling	

TOTAL PROJECT COST: \$ 199,336

## PROJECT DESCRIPTION:

The issue of waste disposal is a critical problem for communities all across America. Many landfills are reaching capacity, new sites are difficult to find and expensive to develop, and the new safety standards required because of groundwater pollution are difficult and expensive to meet. The purpose of this project is to develop a model integrated waste management program for Carbon and Stillwater Counties and the City of Big Timber by 1993. This would be accomplished using a strong information and education program to stimulate significant voluntary public participation in recycling, reusing, reducing, and composting of solid waste.

In 1988, the U.S. Environmental Protection Agency (EPA) proposed the "Subtitle D" rules. These rules establish minimum standards for landfilling including location, facility design, closure and postclosure, financial assurance, and groundwater monitoring. Each state will be required to revise its solid waste regulations upon promulgation of the rules by EPA.

Montana's Solid Waste Management Advisory Committee recently recommended to the Environmental Quality Council that the *State Plan for Solid Waste Disposal* be revised. The committee suggested that the updated plan should include assessments of reduction of waste generated at the source, reuse, recycling, and landfill disposal.

Municipal solid waste contains hazardous household and commercial materials that can pollute groundwater. It is estimated that over half of the nation's landfills are leaking. Future costs for land and for the protections necessary to guard against pollution will be higher than they are today. Most of what we throw away is recyclable and has value. Using recycled materials in manufacturing can reduce water use, water and air pollution, and energy use.

The project has three closely related phases: (1) information and education programs, (2) facilities and equipment, and (3) recycling and composting activities. Phase (1) implementation includes enactment of an extensive public education program on the environmental benefits of recycling and the cost savings that would be realized by extending the life of landfills that would otherwise receive this waste. Education efforts would include a travelling display, brochures, flyers used to advertise recycling drives, preparation of a school education lesson on solid waste management, newsletters, and a small incentive/award program. In addition, the project would provide the facilities and equipment to make recycling and composting more economical and convenient. Equipment to be purchased includes six drop-off boxes for the collection of recyclables, a portable baler, a can/glass crusher, a chipper-



composter, and curbside bags. The applicants are working to achieve 90 percent voluntary public participation in six communities with curbside pickup and an 84 percent rate in remaining areas by December 1993.

The solid waste management efforts would be headed up by a three-county solid waste and recycling committee composed of representatives from cities, counties, solid waste districts, the general public, and the Beartooth Resource Conservation and Development Area. Technical and administrative assistance would come from the Beartooth Resource Conservation and Development Area, with additional technical assistance from Keep Montana Clean and Beautiful and the Midwest Assistance Program. Billings Recycling would act as broker for recyclables.

The results of this project could be used by state agencies, legislators, and local officials from around the state who are interested in developing programs in other communities. The results could also help in updating the *State Plan for Solid Waste Disposal*.

#### TECHNICAL ASSESSMENT:

The crucial state need for this proposal is documented by the Solid and Hazardous Waste Bureau of the Department of Health and Environmental Sciences (DHES). The Montana Environmental Quality Council (EQC) is also very interested in supporting local efforts to reduce and recycle solid waste and expresses the need for a successful "model" integrated waste management program that could be adopted by other communities in the state.

The project is an impressive cooperative effort between local government, quasi-public bodies, and private entities seeking to reduce the amount of waste entering area landfills. Public education is a major prerequisite to achieving this objective, and the project sponsors adequately emphasize the importance of this aspect in changing public attitudes regarding solid waste management. The proposal also acknowledges the need for a paid coordinator to oversee the project.

The proposal lacks detail in several areas, however. First, there is uncertainty regarding the composting of waste presently entering area landfills and how large a component of this waste load is subject to reduction through recycling and composting. Second, little attention is given to defining the market for recyclables that would be collected through the drives and curbside pickup programs. Household hazardous wastes are also mentioned, but no strategy is set forth to deal with this waste component. In summary, there is some question whether sufficient technical and strategic planning has been conducted "up-front" to support the full-scale program proposed here.

## FINANCIAL ASSESSMENT:

The budget is well documented. Total project costs are estimated at \$199,336 of which \$121,587 is requested by this grant proposal. Employing a half-time solid waste/recycling coordinator for the two and one-half year period would use \$18,200 of the grant money. Grant expenditures for supplies, materials, and communications are estimated at \$970; \$10,367 would be used to pay for displays and printed materials. Remaining grant funds would be used to purchase six drop-off boxes for \$12,000, a portable baler for \$5,100, a can/glass crusher for \$3,900, a chipper/composter for \$21,000, and curbside bags for \$50,050.

The project sponsors would contribute \$28,800 in salaries and benefits for two part-time solid waste district employees and \$3,900 for operation and maintenance of purchased equipment.

Other sources of matching dollars include the part-time services of the Beartooth Resource Conservation and Development Area coordinator and secretary, a public information specialist from the U.S. Soil Conservation Service, and Recycling Committee staff members. Several hours of assistance per month from Keep Montana Clean and Beautiful, the Midwest Assistance Program, and Billings Recycling are also identified. Other contributions include a \$2,000 trailer donated by a local grocery store owner for the drop-off boxes.

## ENVIRONMENTAL EVALUATION:

This project has the potential to greatly enhance environmental quality by reducing solid waste and the number of landfills. Reprocessing recycled goods would reduce energy needs, water use, and pollution. No adverse impacts are anticipated.

## PUBLIC BENEFITS ASSESSMENT:

The public would benefit economically and aesthetically by recycling. Economic benefits would be significant to communities by extending the life of present landfills and reducing the size needed in the future.

## RECOMMENDATIONS:

DNRC recommends a grant in the amount of \$45,437, contingent on DNRC approval of the project scope of work and budget. Grant funds may be used for the salaries and operating costs outlined in the proposal. The remaining funds must be spent to purchase informational materials to develop and implement a public information campaign on the methods and benefits of recycling and



composting, conduct recycling drives, buy drop-off boxes needed to establish a permanent drop-off system for recyclables, and purchase a can/glass crusher.

This project was also submitted for grant funding under the Renewable Resource Development Program. Funding of the project under one program will preclude funding under the other.

- 11 -

APPLICANT NAME: Montana Department of Health and  
Environmental Sciences (DHES), Water  
Quality Bureau

PROJECT/ACTIVITY NAME: Nonpoint Pollution Control Project in  
Montana

AMOUNT REQUESTED: \$ 293,240

OTHER FUNDING SOURCES AND AMOUNTS:

Conservation Districts	\$ 1,680
Applicant	\$ 164,550
DNRC, Conservation Districts	\$ 14,920
Bureau (CDB)	
U.S. Environmental Protection	\$ 397,180
Agency (EPA) (proposed)	
Private landowners	\$ 65,700
Soil Conservation Service	\$ 52,800

TOTAL PROJECT COST: \$ 990,070

PROJECT DESCRIPTION:

The quality of Montana's waters has been substantially impacted by pollution originating from two major sources: point sources such as pipe discharges from municipal or industrial sources, and nonpoint sources (NPS) from diffuse origins. Nonpoint source pollution is normally associated with agriculture, forestry, mining, construction activities, hydromodification, and urban runoff. Reduction of nonpoint sources of pollution has been difficult to achieve. Nonpoint source pollution currently accounts for an estimated 95 percent of the total water pollution in Montana, according to the report *Montana Water Quality* (DHES, Water Quality Bureau, May 1986). The beneficial uses of over one-third of Montana's streams are severely or moderately impacted by nonpoint source pollution. An additional one-third of our streams have been impaired to a lesser degree, and nearly two-thirds of our lakes and reservoirs are threatened by nonpoint source pollution.

The objective is to continue a statewide management program to control nonpoint source pollution in Montana. With program funding, sites can be selected and projects implemented to demonstrate best management practices (BMPs) to control nonpoint source pollution. Educational programs can also be conducted to inform landowners and land managers of the results of various practices and their applicability to various conditions. The demonstration projects will reduce the total nonpoint source pollution statewide by only a fraction. The associated education programs will publicize the results of these control efforts. Landowners will be able to see the benefits of implementing similar cost-effective projects on their private lands and may then adopt these practices as part of their operations.

In order for a site to be selected for a demonstration project, the streams must receive a high priority ranking from the Nonpoint Source Task Force and be listed in the *Montana Nonpoint Source Assessment Report, 1988* (DHES, Water Quality Bureau). Projects that are being considered for prioritization as demonstration projects are as follows:

- Big Spring Creek in Fergus County
- Beaver Creek in Hill County
- Big Otter Creek in Judith Basin and Cascade Counties
- Butcher Creek in Carbon County
- Godfrey Creek in Gallatin County (Phase 2)
- Libby Creek in Lincoln County

These projects mainly demonstrate BMPs to reduce nonpoint source pollution from agriculture because nearly half of this type of pollution is caused by agricultural activities.

BMPs may consist of practical planning--for instance, recognizing fragile soils or unstable hill slopes and not developing them or developing with special protective measures. In those instances where resource damage occurs, BMPs may include structural (such as revetment, sediment traps) and nonstructural (such as revegetation, irrigation water management, grazing management), site-specific remedial measures. BMPs selected for each project will necessarily be site-specific. The projects implemented will concentrate primarily on practices to improve or protect the stream and riparian zone as those areas are the key to nonpoint source management activities. Upland areas may receive attention on a site-specific basis as needed to produce favorable results.

Educational materials (including videos and literature) on nonpoint source pollution will be developed and an educational program conducted statewide. The applicant proposes to incorporate these materials into the following types of activities: teacher training, youth camps and groups, county

fairs, and CD supervisor workshops. Project sponsors expect that this effort will result in increased public awareness and widespread voluntary implementation of BMPs.

#### TECHNICAL ASSESSMENT:

The proposal emphasizes a positive, cooperative interagency approach to controlling nonpoint source pollution. Public education and awareness of nonpoint source pollution and how to prevent it are crucial to any control effort. Resourceful farmers and ranchers are much more likely to implement BMPs if they see the results firsthand.

Although reviewers were generally supportive of this proposal, there was one criticism: there is no description of the six demonstration projects. The proposal doesn't give specifics as to what actions will be taken, how much they will cost, and when the projects will be completed. DHES, Water Quality Bureau has explained, however, that specific work plans will be developed for each project upon the obligation of grant funds.

#### FINANCIAL ASSESSMENT:

The RDGP budget breakdown is shown below.

Salaries and wages	\$ 13,440
Employee benefits	1,008
Contracted services	143,260
Supplies and materials	118,260
Communications	2,500
Travel	2,772
Equipment	<u>12,000</u>
TOTAL	\$ 293,240

Landowners would be asked to contribute 25 percent of the funding for demonstration projects; this contribution could be in the form of labor and in-kind services. Costs of the demonstration projects were based on the average cost of projects currently on-line, rather than on the actual costs of the six proposed projects.

RDGP funds would serve as leverage for matching funds under Section 319 of the Federal Water Quality Act administered by EPA. Section 319 matching funds are available at 60 percent federal match for 40 percent state or private match. If no state matching funds are available, federal funding for management of nonpoint source pollution will be more difficult to obtain.



DNRC's Conservation Districts Bureau received a RDGP grant in 1989 for nonpoint source pollution control in Montana. The contract for this \$262,573 grant is currently being drafted. DNRC and DHES, Water Quality Bureau are working cooperatively on that grant.

#### ENVIRONMENTAL EVALUATION:

The project should have positive statewide benefits. The main effect would be water quality improvement. The major component is the potential reduction in streambank soil erosion through voluntary landowner implementation of best management practices on cropland and range.

#### PUBLIC BENEFITS ASSESSMENT:

The implementation of the proposed management plan would improve water quality through the implementation of nonpoint source control demonstration projects and educational programs and the subsequent adoption of BMPs by private landowners. Improved water quality through the reduction of nonpoint source pollution would decrease the costs of treatment of drinking water, increase the value of water resources for recreational and commercial activities, and reduce the human health hazard from several pollutants.

The degree to which the resource quality would be improved is difficult to judge and would depend mainly upon the success of the demonstration projects and voluntary adoption of BMPs by landowners. The improvement to water quality is expected to be significant in the long term.

#### RECOMMENDATIONS:

DNRC recommends that half the requested amount be granted. DNRC's Conservation Districts Bureau has been awarded a 1989 RDGP nonpoint pollution grant for \$262,573; this contract is currently being drafted. Coupled with the current request this funding will allow DHES to continue work on demonstration projects through the 1993 fiscal year.

A grant of up to \$146,620 is recommended contingent upon DNRC approval of the project scope of work and budget.



APPLICANT NAME: Montana Bureau of Mines and Geology  
(MBMG)

PROJECT/ACTIVITY NAME: Downhole Geophysical Logging Techniques  
Applied to Cased Water Well or Monitor  
Well Completion

AMOUNT REQUESTED: \$ 39,749

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 17,067

TOTAL PROJECT COST: \$ 56,816

PROJECT DESCRIPTION:

Well completions are regulated by state law in order to protect both groundwater resources and the groundwater users. Improper well completions typically allow degradation to occur in one or more aquifers. Poorly placed or designed perforated zones or inadequate annular seals can allow water to migrate from a shallow aquifer to a deeper one, or water under artesian pressure can flow up the well to a shallower aquifer or to the surface. Mixing waters of different chemistries will cause degradation of one or the other aquifer. Surface water (such as runoff during a rainstorm) entering a well can cause turbidity problems and carry coliform, heavy metals, pesticides, herbicides, and other contaminants. Once an aquifer has become contaminated, cleanup can be nearly impossible. Successful groundwater protection involves avoiding contamination.

This project would attempt to develop the necessary technology to investigate well completions in the field using downhole geophysical tools. The project would consist primarily of two parts: (1) laboratory trials to determine the most likely geophysical techniques, and (2) field trials to confirm those techniques. The laboratory portion of the project would consist of bench testing several geophysical tools in several lithologic settings. The controlled laboratory environment would allow careful calibration of the tools and a selection of the most appropriate methods. Utilizing these less expensive trials should reduce the number of methods examined in the field trials.

The field portion of the project would involve drilling several shallow holes in two lithologic settings. Wells would be constructed in these holes using several standard completion methods. These holes would be logged, using the methods chosen in the laboratory trials, both before and after the casing and

annular seal were emplaced. These results would be used to further develop and describe the usability of the geophysical tools for identifying well completions.

The final step in the field trial would be to test the techniques on several commercially drilled and completed wells. This would be done in conjunction with a local driller during routine construction of standard water wells. This would be a blind test, meaning the investigators would not have prior knowledge about the completion methods used by the driller.

#### TECHNICAL ASSESSMENT:

The goals of the project are basically three-fold: (1) detect the type of completion method used in a well, (2) locate the perforations, and (3) determine if the completion seal is complete. Although the wire-line tools chosen for this project should show usable results for the detection of the completion method under certain situations, the tools may prove inadequate for determination of perforation location and success of the seal.

Current oil-field technology can detect movement of fluids and effectiveness of annular seals. These methods include cement bond logs (an acoustic device), cement evaluation logs (directional acoustic/density device), a new oxygen-activation logging device, and injection of short half-life compounds in conjunction with gamma ray readings. Because of high cost only the injection of radioactive fluids and cement bond logs may be usable in the groundwater industry. The cost-effectiveness of these devices should be examined in this study.

The proposal is important because aquifer protection is critical, and this project will potentially indicate a low-cost means of detection of problem wells. It would be an important step in improving techniques used in water well and monitoring well completions with the addition of other logging tools to the study. The Board of Water Well Contractors and the Water Quality Bureau of the Department of Health and Environmental Sciences (DHES) strongly support the study.

#### FINANCIAL ASSESSMENT:

The project budget is designed for a one and one-half year study with laboratory time and one full field season. The project would require a total of 10 months of professional time, plus up to 300 hours of part-time student help for material handling and record keeping. Of the 10 months professional time, 8 months would be spent on design, implementation, and reporting, and 2 months would be spent administering the project. Students would be hired through their respective schools and would be paid \$6.50 per hour.



The geophysical specialist is intended to be contracted for the project through the Montana Department of State Lands (DSL). The geophysical specialist costs listed for this contract include salary and benefits. Drilling would be contracted at \$5.00 per hour for 160 feet, plus redrilling for hole abandonment, for a total of 320 feet. Additional drill rig costs are for mobilization and rig time, especially during hole abandonment. Geophysical tool rental is for a staffed logging truck. The budgeted cost is based on phone conversations with a geophysical logging company. The quoted rate was \$385 per day for field trials and \$300 per day for lab trials. If state-owned geophysical logging equipment becomes available at a savings to the project, it would be utilized.

The casing and plugging costs are based on current prices for PVC and bentonite. The budgeted amount includes material for permanent hole abandonment.

Travel costs reflect travel to field sites and for materials acquisition in the Billings area. No overnight travel is anticipated. Mileage is figured on a state rate of \$0.40 per mile and 2,500 miles.

MBMG will commit \$17,067 to provide salary, benefits, and indirect costs (figured at 30 percent of salary, wages, and benefits). The remaining funds, \$39,749, would be provided by RDGP.

#### ENVIRONMENTAL EVALUATION:

The project itself would have a minimal impact on the natural environment, limited to the field phase of the research. Surface disturbance would be minimized and the sites fully reclaimed upon completion of the project. The test wells would be properly abandoned following DSL and DNRC standards.

The project has a definite use in preventing, mitigating, and repairing potential or actual damage to groundwater resources that might result from improper or flawed completion of monitor wells drilled for mineral development.

#### PUBLIC BENEFITS ASSESSMENT:

The goal of the project is to produce a "cookbook" for the use and interpretation of selected downhole geophysical techniques to determine cased-well completions in water wells and monitor wells, with a discussion of the strengths and weaknesses of the various techniques. If success is achieved, MBMG will have produced a reliable, cost-effective approach for verifying or evaluating well completion. This approach could be utilized by state agencies (DNRC, DSL, MBMG, DHES) in a variety of roles:

to support research efforts, resolve potential human health problems, assist in regulatory analysis or enforcement, etc. Private industry, including logging companies and well drillers, would also use the techniques developed.

The project can help to ensure the quality of the groundwater resource in the state by providing an effective, reliable means of verifying proper well completion and identifying improper completion situations.

RECOMMENDATIONS:

A grant of up to \$39,749 is recommended for this project contingent upon the following.

1. DNRC must approve the project scope of work and budget.
2. MBMG must evaluate the applicability of other tools--e.g., radioactive fluids and cement bond logs--to this study.

- 13 -

<u>APPLICANT NAME:</u>	Montana Board of Oil and Gas Conservation
<u>PROJECT/ACTIVITY NAME:</u>	Abandoned Well Plugging Project "C"
<u>AMOUNT REQUESTED:</u>	\$ 144,000
<u>OTHER FUNDING SOURCES AND AMOUNTS:</u>	
Applicant	\$ 20,000
<u>TOTAL PROJECT COST:</u>	\$ 164,000
<u>PROJECT DESCRIPTION:</u>	

This project addresses a statewide need to reduce the potential adverse impacts of improperly abandoned wells on the water resources, land use, and mineral values of the state. The project reflects the ongoing concern for potential point source degradation of groundwater.

In September 1989 the Board of Oil and Gas Conservation (Board) contracted with the Resource Development Bureau of the Department of Natural Resources and Conservation (DNRC) to conduct a search and examination of Board files and electronic databases. The purpose was to compile a list of pre-law (1954) oil and gas wells in need of on-site inspection. Grant applications to the Reclamation and Development Grants Program (RDGP) would be developed to properly abandon those wells that pose the most severe environmental and/or public health hazards.



Several thousand old wells (pre-1954) are in need of field checks. The Board has submitted three applications for RDGP grant funding. In terms of priority the Board rates this proposal lower than Abandoned Well Plugging Projects "A" and "B" (found elsewhere in this book). Priority was assigned after field inspection and based on the likelihood that a particular well could cause severe groundwater or surface water contamination if left unplugged. The Board has indicated that there is no liable or responsible party for the proposed plugging and surface cleanup.

The proposed project involves the surface preparation of six well-sites, the moving in and rigging up of an appropriately sized drilling or workover rig, the re-entry and drilling or cleaning out of each well to a depth necessary to control any water or hydrocarbon flow, and the setting of cement plugs in the hole or the setting of cast iron bridge plugs in cased portions of the wells. Upon completion of the well work, the surface would be cleaned of debris and drilling materials, pits backfilled and leveled, and the entire area recontoured if necessary. Revegetation of the disturbed area would be accomplished, utilizing seed mixtures appropriate for the area and satisfactory to the landowner.

#### TECHNICAL ASSESSMENT:

The names and locations of the six wells are:

- |               |  |
|---------------|--|
| 1. Mason 20-7 | Section 20, T29N, R50E<br>Roosevelt County   |
| 2. Clark 20-9 | Section 20, T29N, R50E<br>Roosevelt County   |
| 3. McCall #2  | Section 24, T11N, R30E<br>Madison County     |
| 4. Graves #1  | Section 24, T11N, R30E<br>Musselshell County |
| 5. N.P. #1    | Section 21, T9N, R23E<br>Musselshell County  |
| 6. Well #1    | Section 7, T25N, R24E<br>Yellowstone County  |

All of the wells listed under this proposed project should be properly abandoned and surface reclamation accomplished as soon as possible. These wells have likely been creating surface problems and potential groundwater damage for a relatively long time.

The project's final results would be evaluated using the same criteria applied to an oil and gas operator's abandonment operations. To be considered successful, the well must be left in a stable condition downhole, with mechanical or cement plugs preventing fluid migration between porous zones. The surface must be recontoured and revegetated in such a manner that the original contours are approximated to the extent possible and suitable vegetation reestablished to prevent erosion.

#### FINANCIAL ASSESSMENT:

Each individual well under the project would be scheduled for plugging in the order listed. Generally the wells would be treated separately for project administration purposes, with the remaining unused funds available for the next well on the list following successful plugging of the preceding well(s). While the time allotted for plugging operations is relatively short (e.g., five to ten days), the surface restoration, including revegetation, would be likely to take at least one growing season before a final release of the site could be done.

The costs of plugging are based on the estimated time to plug, the cost of plugging materials, and the cost of dirt work done in preparation for re-entry of the well and restoration of the location upon completion of the project. Third party services, including trucking of water and materials, logging or other wireline services, and renting specialized equipment, such as fishing tools, are also included in the estimate.

While the well plugging projects would generally be undertaken in the order listed, some flexibility to change priorities is needed as well-bore conditions occasionally change dramatically. In some instances it may be necessary to substitute a newly discovered problem well in lieu of or ahead of a well already on the project list. This change in priority may be dictated by the potential for surface water or (especially) groundwater damage; wells would be prioritized based upon the estimated severity of damage likely to occur if the well is left unplugged. In some cases cost estimates may prove inaccurate by the time the well work is scheduled; there is no guarantee that all of the wells listed can be plugged for a cost at or under the maximum approved funding.

As the Board has done in the past, it would use qualified oil-field contractors to perform the well work involved in this project. Selection of the contractor would be on a bid basis and would comply with the statutory requirements for public projects. The contractor would be under the general supervision of the Board's staff, including its petroleum engineer, petroleum geologist, and environmental coordinator. The Board's chief field inspector would be the overall project manager. The field

inspector responsible for the area in which the well is located would be the full-time supervisor assigned to each project well during active drilling operations.

The estimated total cost of \$164,000 is reasonable for the level of work described.

#### ENVIRONMENTAL EVALUATION:

The proposed project is intended to provide a substantial positive environmental impact; there would be minor, short-term impacts associated with the project. The principal impact would be the short-term impact to air quality due to emissions from rig engines and dust and noise from traffic and dirt work involved in moving equipment to and from the location and in operations. It is anticipated that beneficial impacts would far outweigh any short-term adverse impacts. Non-implementation of this project would permit groundwater contamination to remain unabated.

#### PUBLIC BENEFITS ASSESSMENT:

The greatest public benefit to be achieved in virtually every case would be the elimination of potentially severe groundwater contamination by non-potable water, lower quality water, or possibly hydrocarbons from deeper formations. In some cases potentially commercial mineral-bearing zones (including oil and gas zones) may be protected from damage by extraneous water and hydrocarbons.

#### RECOMMENDATIONS:

A grant of up to \$144,000 is recommended for this project, contingent upon DNRC approval of the project scope of work and budget. For any wells substituted for the ones listed, the Board must determine that there is no responsible party and submit this determination in writing to DNRC. This requirement shall be met prior to contractor selection.

With the exception of the Board's Abandoned Well Plugging Project "A" and Abandoned Well Plugging Project "B" (found elsewhere in this book), this recommendation assumes that the Board does not receive additional RDGP or RIT funds from the 1991 legislature to plug and restore abandoned well sites. To the extent that the Board receives funds directly from the legislature for these activities, grant funds will be reduced on a dollar-for-dollar basis.



APPLICANT NAME: Toole County

PROJECT/ACTIVITY NAME: North Toole County Reclamation Project

AMOUNT REQUESTED: \$ 298,966

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 21,153
-----------	-----------

TOTAL PROJECT COST: \$ 320,119

PROJECT DESCRIPTION:

In northern Toole County, extensive development of oil production facilities began in 1922. It is estimated that several thousand wells were drilled prior to 1954, when regulations for management of the Kevin-Sunburst Field became effective. Frequently, well placement was 10 wells per 40 acres over a total area of about 13,000 acres. There were no regulations at that time addressing environmentally safe methods for disposal of waste oil and brines. Therefore, these wastes were commonly dumped on the land surface. Also, as oil production decreased, the population declined, leaving many facilities abandoned.

The result today is the presence of dilapidated structures and the remains of production equipment scattered over the land. Soils contaminated by past dumping of wastes remain unproductive. The condition of this oil field is a threat to public health, soil productivity, water quality, and economic opportunity in the area. Removal of structural debris and reclamation of impacted soils are needed.

The objectives of this ongoing project are to continue inventory and assessment of sites needing reclamation work, characterize groundwater quality in the area, accomplish removal and burial of abandoned buildings and equipment, continue soil reclamation research, and implement research results.

To date, cleanup has been accomplished at 20 sites. Soil reclamation research has been initiated at two of the sites. Monitoring of these two sites would continue, and the most effective treatments would be applied to larger areas at new sites. Abandoned debris and structures have been removed from 3,080 acres, more or less. Money available through a 1989 RIT grant will be spent on inventory and reclamation of additional sites.



The North Toole County Reclamation Project is administered by a five-member board representing agricultural and oil industry interests. The reclamation strategy includes site assessment, removal and burial of structures and debris (performed by contracts awarded through public bid), drilling of monitoring wells, and application of soil treatments, with reseeding as necessary. A final product of this project will be a reclamation planning guide that will be applicable to similar sites in Montana.

#### TECHNICAL ASSESSMENT:

Over 13,000 acres of northcentral Toole County contain refuse, equipment, machinery, vehicles, and dwellings abandoned as a result of diminished oil and gas exploration, extraction, and processing. In addition, oil-saturated soils, sludge pits, and wastewater (brine) sites have contaminated groundwater supplies, thereby preventing revegetation and creating an aesthetically unpleasant appearance. In most cases, present landowners are not responsible for this situation and do not own the oil and gas leases on their land. Parties who are legally responsible for the condition of these sites are either disbanded companies or deceased individuals. Agricultural producers lack venture capital to remove hazardous dwellings and equipment on owned or leased lands. The project area is in an economically depressed area with a severely deteriorating infrastructure and high unemployment. Additionally, the dilapidated structures are a safety hazard for those working in and around these sites. Hazardous wastes associated with oil extraction and processing, though undocumented to date, may also be present.

Because equipment and structures are often scattered, potential land uses in the area are severely limited. The debris causes injury to cattle and damage to farm equipment, preventing agricultural use of these lands. Debris removal is needed to allow diversification of land use, which will improve property values.

Oil and brine wastes that have been dumped on the ground impact soil productivity and affect groundwater and surface water quality. Oil-contaminated soils usually have surface oil crusts that eliminate vegetative growth. Methods of restoring productivity to these sites are needed. Shallow groundwater supplies contaminated by indiscriminate dumping of oil-field wastes differ from naturally salinized groundwater supplies in terms of water chemistry (chloride-rich oil-field brines versus sulfate-rich natural conditions), and this requires some modification of standard reclamation practices. In addition, the chlorine-rich brines accentuate the health hazards to humans and livestock. Over the years, local ranchers have reported numerous deaths of cattle attributed to ingestion of contaminated water supplies. Many producers have discontinued livestock

production due to lack of quality water. Also, altered feeding and watering habits have been imposed on local wildlife due to contaminated water supplies.

Isolated sand and gravel lenses within the glacial till provide domestic quantities of potable water, but are usually limited in areal extent and distribution. A region-wide degradation of shallow groundwater quality is evidenced by the increasing presence of saline seep. As more of the domestic and livestock wells are lost due to contamination from oil-field brines, the alternatives for potable water are seen to be very scarce or very expensive.

In summary, the reclamation and cleanup methods proposed represent a logical and necessary approach to the problem of lands adversely impacted by past oil-field production. Continued project coordination with Montana State University, Soil Conservation Service, Montana Salinity Control Association, local extension service, landowners, industry, and others is vital to project success.

#### FINANCIAL ASSESSMENT:

Relative to Toole County's 1990 reclamation costs, the budget proposal is excessive. Since the inception of the North Toole County Reclamation Project in 1987, 3080 acres (20 sites) have been reclaimed at a cost of \$257,072 (\$83.46/acre). Although the overall project cost per acre is not usually high (especially when compared to coal or metal mine reclamation, for instance), the current construction budget is significantly out of proportion to previous work. For example, construction costs for the second grouping of sites bid (1990 Group II), involving approximately 760 acres, averaged \$83.38/acre. The current proposal lists less acreage (520 acres) and less severe site conditions at a construction cost of \$371/acre, or a total of \$192,920. The need for the increased expenditure of \$288/acre is not apparent.

Unless additional sites are added to the current proposal, a more realistic estimate of construction costs--i.e., design, inspection, and construction--would be in the \$65,000 to \$70,000 range.

In light of the balance remaining from previous grants which is yet (as of October 1990) untargeted for expenditure, it would be advisable to decrease the amount requested rather than add additional sites at this time.

The following RDGP grants have been awarded previously:

<u>Year</u>	<u>Grant Award</u>	<u>Remaining Balance</u>
1985	\$298,130	\$27,581
1987	\$150,000	\$93,744
1989	\$300,000	\$300,000

Other costs--i.e., salaries and wages (\$7,150), supplies and materials (\$1,000), communications (\$1,200), travel (\$5,350), and sampling/drilling (\$11,000)--are reasonable and proportional to the activities proposed. The county is contributing \$21,153 for in-kind services.

These administration costs and the adjusted construction cost would reduce the RDGP funding needed to \$105,000 (which includes a 10 percent contingency).

#### ENVIRONMENTAL EVALUATION:

Minor short-term impacts, primarily noise, dust, soil compaction, and vegetative disturbance, are associated with project construction activities. Considering the expected benefits of soil and water quality improvement, creation of wildlife habitat, and improved aesthetics over the long term, the net environmental impact is beneficial.

#### PUBLIC BENEFITS ASSESSMENT:

Public benefits include reduced health and safety hazards, improved quality of soil and water resources, and enhanced economic opportunity on reclaimed lands. A systematic, logical approach to abate the adverse impacts created by abandoned oil and gas operations benefits all Montanans.

#### RECOMMENDATIONS:

A grant of up to \$105,000 is recommended for this project contingent upon the following.

1. DNRC must approve the project scope of work and budget.
2. The project must be coordinated closely with the Department of Health and Environmental Sciences' Solid and Hazardous Waste Bureau.



APPLICANT NAME: Pesticide County Cleanup Committee

PROJECT/ACTIVITY NAME: Pesticide Contamination Cleanup

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 25,000
Department of Health and Environmental Sciences (DHES)	\$ 15,000

TOTAL PROJECT COST: \$ 340,000

PROJECT DESCRIPTION:

The Pesticide County Cleanup Committee (PCCC), a coalition of five Montana counties, is proposing a project to clean up pesticide-contaminated soils at three rural airports and two weed control districts in Montana. Pesticide-contaminated soils at all of these sites and groundwater contamination at one site pose potential health and environmental problems to the population and/or surrounding environment. Tetra-dioxin (2,4-D), found at one site, is the most toxic chemical known--a potent carcinogen. Some of the other pesticides found (DDT, Dieldrin, and Endrin) have been banned because of their toxicity. The Joliet site is ranked first because it has the worst contamination problem. The other four sites are not ranked because they are all very similar. The site names and locations are:

Carbon County Weed Control District - Joliet  
Geraldine Airport - Chouteau County  
Lake County Weed Control District - Ronan  
Miles City Airport - Custer County  
Richey Airport - Dawson County

This is a three-phase project. The first phase involves investigation of the sites to further evaluate the nature and extent of the contamination. The second phase involves evaluation of cleanup actions based on a health and environmental risk assessment; this is considered the remedial investigation and feasibility stage. The third phase of the project would be implementation of cleanup measures.

In 1989, a \$150,000 RDGP grant was given to DHES, in association with PCCC, to complete the first two phases of the cleanup project. This project was put under contract in April 1990. The contamination investigation, treatability studies, and remedial investigations are currently under way. A white rot fungus degradation alternative looks the most promising. Using



the white rot fungi is a bioremediation technique that decomposes the contaminants without removal and transport of the soil and requires minimal maintenance.

As owners of the airport properties or operators of the weed control districts, the counties are liable parties at all sites. Although Chouteau, Dawson, and Custer Counties didn't contribute to the contamination problems at the airports, the applicators who did are deceased, not financially viable, or cannot be located. All five sites have pesticide-contaminated soils resulting from improper waste disposal and chemical storage and handling. The contamination problems resulted from historical operations, not current operations. Management practices have been instituted to prevent further contamination of the sites still in use. The counties that own and/or operate the sites have inherited the responsibility to clean up the contamination and need the financial assistance this project would provide. Cleanup costs are prohibitive for these counties, would require special mill levies, and most likely would drain the weed control budgets. Also, cleanup would take years to accomplish due to lack of funding.

#### TECHNICAL ASSESSMENT:

The problem and project are well documented. Preliminary sampling indicates contamination with health and safety risks at all sites. The 1989 RDGP grant provided funding to investigate the nature and extent of contamination at each site and to evaluate the cleanup alternatives for each site. All appropriate alternatives are being considered and will be selected after completion of the 1989 RDGP grant. The bioremediation alternative--i.e., white rot fungus--is the preferred alternative at present, mainly because it is the most cost-effective. The final assessment of this alternative will be completed in November 1990. The 1991 RDGP funds would be used exclusively for cleanup of the sites.

The methodology proposed is consistent with Montana Comprehensive Environmental Cleanup and Responsibility Act procedures governing remedial actions at sites containing hazardous substances. The proposed remedial action would comply with established cleanup standards, be cost-effective, adequately protect health and the environment, be permanent, and use innovative technology to the extent practicable. In that the project involves the remediation of sites where hazardous wastes or regulated substances threaten public health or the environment, it would be an appropriate use of RDGP funds.

## FINANCIAL ASSESSMENT:

The applicant was not able to provide a detailed breakdown of the budget. A \$300,000 sum is shown under contracted services. This was acceptable because cleanup alternatives have not yet been selected. Also, the general surface areas of soil contamination are known, but the depths of the contamination are unknown. Sampling of the contaminated soil depths is currently under way as part of the 1989 grant. The \$300,000 cleanup cost is based on a soil contamination depth of 2 feet, a cost of \$100 per cubic yard for soil cleanup using the bioremediation technique, bid processing costs, and contractor oversight. All administrative costs, such as salary and travel for the project coordinators, would be donated as an in-kind match. In addition, any equipment that the counties can contribute would be donated as an in-kind match.

Presently it is unknown whether any 1989 funds will be available for cleanup, but it is most likely that 1989 funds will be available for cleanup of the most severely contaminated site at Joliet.

The \$300,000 funding level is based on the assumption that the bioremediation technique will be feasible. The other alternatives are more expensive. Therefore, if one of the other alternatives must be used, the requested funding won't be sufficient. In that case, only the most severely contaminated sites would be cleaned up.

## ENVIRONMENTAL EVALUATION:

Cleanup alternatives would involve short-term disruption, excavation, and possibly some removal of soils at the site. In the long term, this disruption would be beneficial, as contaminated soils would be cleaned up or replaced with uncontaminated soils. Cleanup of soils would reduce or prevent the potential of groundwater and surface water contamination caused by runoff from the soils. Removal of pesticides at these sites is important to reduce the hazard of exposure to contaminated soil and dust particles and the potential for dangerous emission of toxic air pollutants in the event of a fire.

All impacts related to cleanup would be closely monitored, and applicable rules and regulations would be followed. If the white rot fungi alternative is chosen, research has shown there are no known negative effects from treating contaminated soil with the fungi. The fungi breaks down contaminated compounds into safe, naturally occurring compounds without producing toxic byproducts.

## PUBLIC BENEFITS ASSESSMENT:

The public, mainly the affected local communities, would receive long-term benefits from containment or removal of contaminated soils. The types of pesticides and herbicides found, and the high concentration observed, indicate an imminent and substantial health threat. Individuals may be exposed to contamination at the sites by ingestion or skin absorption of contaminated soils, inhalation of contaminated dust, and possibly ingestion or absorption of contaminated groundwater. The cleanup would reduce or eliminate the health risks associated with each site. Further spread of contamination to groundwater or surface water would be prevented.

## RECOMMENDATIONS:

A grant of up to \$300,000 is recommended to maintain continuity with the present cleanup investigation. This funding is contingent upon the following conditions:

1. DNRC must approve the project scope of work and budget.
2. In the event DHES recovers cleanup costs from a responsible party at some point in the future, these funds shall be used to reimburse the RDGP special revenue account.

- 16 -

APPLICANT NAME: Department of State Lands (DSL)

PROJECT/ACTIVITY NAME: Well Assessment and Abandonment

AMOUNT REQUESTED: \$ 300,000

## OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 7,027

TOTAL PROJECT COST: \$ 307,027

## PROJECT DESCRIPTION:

The Department of State Lands (DSL) is proposing to evaluate the condition of 26 oil wellbores in state-owned Section 36, T35N, R2W, and properly abandon those wells found to be in unsatisfactory condition or no longer producible. The site is located one mile west of the town of Oilmont, Montana.

Each well would be entered and assessed on an individual basis. The wells would first be cleaned and tested for casing integrity. If the pressure test proves unsatisfactory (i.e., loss of pressure >10 percent), the well would be plugged from its



total depth to the surface. Wells that do not evidence pressure loss would be secured with appropriate closing valves. When well work is completed, the failed well locations would be graded to the surrounding terrain and seeded.

Should funds remain from this grant, a survey of state-owned lands in the same area would be conducted by DSL personnel with the aid of contract help or summer students (college level). The sites would be physically surveyed to assess the status of shut-in or temporarily abandoned wells. This information would be utilized to formulate additional grant requests if more work is indicated by the result of the survey.

The well work is anticipated to be completed in one field season. If there are remaining funds, the survey would take place over the course of a second season.

#### TECHNICAL ASSESSMENT:

There is little doubt that Section 36 wellbores create a negative impact on soil, air, water, and vegetative resources. Currently, open wellheads pose hazards to wildlife and human activity by releasing natural gas and hydrogen sulfide gas, and by the existence of open holes 1,000 feet deep. The soils around the wellheads are oil-saturated, and the ground is covered with oil-field production equipment, reducing the agricultural productivity of the land. Local groundwater, though a very limited resource, is probably being polluted by water and gas flow through corroded casing. These problems would be corrected by this grant project.

A complicating factor, however, is whether RDGP funds should be allocated for this cleanup effort. RDGP statutory provisions state that "a proposed project is not eligible for funding if there is a liable party who would be relieved of financial or legal responsibility and who can reasonably be expected to be held responsible." The mineral lessee, apparently liable for the cleanup and plugging operations proposed here, has declared Chapter 7 bankruptcy. It would appear premature to proceed with the funding of this project until the full outcome of the bankruptcy proceedings is known.



### FINANCIAL ASSESSMENT:

The budget is well documented and reasonable for the work described. The bulk of the costs are contracted services as shown below:

Engineer	\$ 31,850
Plugging contractor	204,740
Supplies and materials (cement)	54,000
Seed	650
Contingency	<u>8,760</u>
TOTAL	\$ 300,000

DSL is contributing \$7,027 for project coordination and oversight.

### ENVIRONMENTAL EVALUATION:

Major adverse impacts to the environment are not expected if proper care is taken in the containment and disposal of drilling and plugging fluids or other wastes, if safe abandonment practices are observed, and if the sites are properly reclaimed. Short-term impacts can be expected, primarily dust pollution, emissions from rig engines, noise, vegetation disturbance, and soil compaction. These impacts could be mitigated by prompt and proper reclamation and abandonment procedures.

This project would have a positive impact on soil, air and surface water quality, vegetation, and wildlife. Additionally, petroleum resources and groundwater would be protected by this plugging program.

### PUBLIC BENEFITS ASSESSMENT:

In addition to soil and water improvement, successful completion of this project would potentially improve agricultural and oil production on state-owned lands. This would be of significant benefit to the school trust fund.

### RECOMMENDATIONS:

A grant of up to \$300,000 is recommended for this project contingent upon the following.

1. DNRC must approve the project scope of work and budget.
2. DSL must furnish a legal opinion, based on the final bankruptcy court action, that there is no responsible party.

APPLICANT NAME: Department of Natural Resources and  
Conservation (DNRC), Water Management  
Bureau

PROJECT/ACTIVITY NAME: Arsenic in Upper Missouri River Basin  
Surface Water and Groundwater

AMOUNT REQUESTED: \$ 179,330

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 12,200
U.S. Bureau of Reclamation (USBR)	\$ 60,000
U.S. Geological Survey (USGS)	\$ 115,830

TOTAL PROJECT COST: \$ 367,360

PROJECT DESCRIPTION:

Arsenic concentrations in upper Missouri River basin surface water exceed standards for surface water established by the State of Montana and the U.S. Environmental Protection Agency (EPA). Near the source (geothermal springs in the headwaters of the Madison drainage in Yellowstone National Park), surface water and groundwater arsenic concentrations routinely exceed federal drinking water standards by three-fold.

This project has two objectives. First, a reconnaissance level, well-sampling investigation would be conducted to identify any areas outside the Madison drainage where elevated arsenic concentrations occur in groundwater. If problem areas are identified, public health officials would be notified, and further study would attempt to define the severity and source of the problems.

The second objective is to develop a water quality model for the upper Missouri River. The model would be capable of routing monthly dissolved and total arsenic loads from the source in the upper Madison River to a site below Holter Dam. Water quality data collected at seven stations by the U.S. Geological Survey over an 18-month period would be used to expand the database for model calibration and verification. Additional synoptic studies would focus on determining the importance of various geochemical and sedimentary controls (e.g., pH, adsorption-desorption) on arsenic mobility and transport throughout the upper Missouri River basin.

The water quality model developed by the Department of Natural Resources and Conservation (DNRC) and the U.S. Bureau of Reclamation (USBR) would be used to evaluate the effect of water

management alternatives on arsenic concentrations and loads in the upper Missouri River basin. Several scenarios representing alternative water allocations (e.g., varying levels of consumptive depletions and instream flows) would be developed and effects on arsenic in surface water modeled.

#### TECHNICAL ASSESSMENT:

Reviewer support for this proposal was mixed. In brief, most discussions focused on the need for additional water quality data and the modeling approach proposed.

The proposal assumes that using a conservative water quality model with existing data is inadequate. Secondly, it assumes that a comprehensive modeling approach, including chemical reactive terms that account for the mobility and transport of trace contaminants within and between basic components of the overall system, would be of considerable importance in allocating surface water reservations.

Regarding the first assumption, some researchers contend that existing data are adequate for a conservative model. Assessing the validity of this contention should precede comprehensive water quality modeling and data collection. For example, when comparing total arsenic versus discharge in the upper Missouri River basin, the bulk of data conforms very closely to a simple dilution line. Using these data one could readily do an arsenic-conservative model evaluation. If these results provide reasonable agreement for 90 percent or more of the data, continued investigation is probably not necessary.

Regarding the second assumption, and perhaps more important, arsenic's effects on health are commanding increasing regulatory attention from both EPA and the Department of Health and Environmental Sciences (DHES). A confusing aspect of the arsenic problem involves two apparently contradictory water quality standards. Based on acute and chronic toxicity, federal drinking water standards limit arsenic to 50 micrograms per liter ( $\mu\text{g/L}$ ; microgram =  $10^{-6}$  grams) in treated water supplies. On the other hand, Montana's surface water (instream) standards--based on EPA's one-case-per-million risk level for carcinogens--allow no increase if an instream value exceeds 20 nanograms per liter ( $10^{-9}$  grams). Upper Missouri River water between Three Forks and Fort Peck Reservoir now contains arsenic concentrations 500 to 2,500 times greater than the 20-nanogram/l standard; the Madison River's concentrations are 2,500 to 10,000 times greater. Strict interpretation and enforcement of arsenic standards by EPA or DHES could curtail further consumptive uses of water or other activities that would elevate arsenic concentrations in streams. If this eventuates, the modeling proposed here would be unlikely



to affect water allocations. It would appear that, until a health risk assessment is conducted by state and/or federal agencies, funding of this request is premature.

#### FINANCIAL ASSESSMENT:

As proposed, this project is a cooperative effort involving DNRC, USBR, the U.S. Geological Survey (USGS), and the University of Montana (UM). The total project cost is \$367,360. Anticipated federal matching funds include \$115,830 through the USGS state/federal cooperative program and \$60,000 through USBR's Technical Assistance to States program. DNRC would contribute \$12,200 (in in-kind services), and the project seeks a grant of \$179,330.

USGS personnel would conduct the groundwater inventory (first objective) and collect surface water data (second objective). Two hydrologists, full-time for one year and half-time for one year, would accomplish the work, assisted by field technicians. A portion of the groundwater work might be subcontracted to the Montana Bureau of Mines and Geology. Sediment geochemistry (second objective) would be accomplished by a graduate student at the University of Montana. For the water quality modeling, DNRC would provide a hydrologist half-time for one year, and USBR would provide a hydrologist full-time for one year.

If initial investigation and study support expanded data collection and comprehensive modeling, then costs appear reasonable for the level of work proposed.

#### ENVIRONMENTAL EVALUATION:

This study would not have an adverse impact on the environment.

#### PUBLIC BENEFITS ASSESSMENT:

Water quality data collected and the model developed by the project would increase understanding of the arsenic cycle and improve land and water managers' ability to plan future development that ensures maintenance of surface water and groundwater quality. All water users in the upper Missouri River basin, and especially those who rely on the mainstem for domestic supplies and recreation, would benefit from knowledge of arsenic concentrations in local water supplies.

The information could also be used by the Board of Natural Resources and Conservation to make informed decisions on how to allocate water for existing and future use through the water reservation process currently in progress.



## RECOMMENDATIONS:

A grant of up to \$179,330 is recommended for this project contingent upon DNRC approval of the project scope of work and budget. Funding is further contingent on completion of an EPA/DHES health risk assessment for the upper Missouri River to identify what level of arsenic, if any, constitutes an unacceptable public health and/or environmental risk. The project sponsor must then show how this investigation will help identify appropriate management actions to be taken to minimize these risks.

- 18 -

APPLICANT NAME: Department of State Lands (DSL)

PROJECT/ACTIVITY NAME: Comet Mine Wetlands Development

AMOUNT REQUESTED: \$ 250,700

### OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 4,744

TOTAL PROJECT COST: \$ 255,444

### PROJECT DESCRIPTION:

The Montana Department of State Lands (DSL) proposes a metal mine reclamation project at the Comet Mine in the High Ore Creek drainage north of Basin, Montana, which would complete reclamation work performed during the 1990 construction season. The project objectives are to: (1) enhance the quality of drainage water flowing from the Comet Mine tailings area, (2) reduce the concentration of heavy metals entering High Ore Creek and the Boulder River, (3) determine the effectiveness of the system through an active monitoring program, and (4) evaluate the applicability of the system for similar mining sites.

The general nature of the project would be to construct wetlands downstream of the tailings to provide a system for biologically and chemically removing heavy metals from the tailings drainage water. The wetlands system would have several individual cells that receive a controlled flow of water based on the area of wetlands available. Associated with the wetlands, the project would also include the construction of a sheet-pile cutoff wall to restrict the flow of groundwater beyond the tailings area and the construction of a drainage interceptor ditch to reduce surface water runoff flows into the wetlands.

This project would be an extension of reclamation work at the Comet Mine performed in 1990. The 1990 reclamation project, titled the High Ore Creek Reclamation Project, is funded, in part, by a 1987 Resource Indemnity Trust (RIT) grant awarded to the Montana Department of Fish, Wildlife and Parks (DFWP). Construction of a wetlands treatment system was approved as part of the 1987 RIT grant; however, budget limitations prevented its inclusion in the 1990 construction work. The main components of the reclamation work completed in 1990 include: (1) rehabilitation of the High Ore Creek diversion around the Comet Mine tailings by constructing a channel lined with an impermeable membrane liner, (2) construction of a sediment dam and subsurface drainage system at the toe of the tailings, and (3) construction of a sheet-pile cutoff wall upstream of the tailings to reduce groundwater flow into the tailings area. The objectives of the 1990 work are to reduce the amount of drainage water entering the tailings area and to reduce the amount of sediment and suspended particles in the drainage water leaving the tailings.

Much of the design for the wetlands was completed during the design for the 1990 reclamation work. Any updated technology would be incorporated into the proposed wetlands design, if needed.

The currently proposed construction would be downstream of the new sediment dam and would receive water from the subsurface drainage system. The sediment dam (1990 construction) will function to remove the majority of suspended particles from the drainage water. The purpose of the wetlands would be to reduce heavy metal concentrations in the drainage water. The sheet-pile cutoff wall would help reduce the flow of groundwater beyond the tailings area, possibly bringing the water to the surface for further treatment at the sediment dam and wetlands. The proposed ditch at the south side of the wetlands would help to reduce the volume of surface runoff entering the wetlands area.

The project would include a monitoring program to evaluate the effectiveness of the wetlands. Sampling of the water entering and leaving the wetlands would be undertaken. Monitoring of High Ore Creek upstream and downstream of the Comet Mine would be included also.

#### TECHNICAL ASSESSMENT:

The original scope of work in the 1987 DFWP grant included rehabilitation of the diversion channel, construction of sediment dams, installation of an upstream cutoff wall, construction/repair of a south drainage ditch, and construction of a wetlands treatment system. A professional service contract was entered into between DFWP and a consultant to prepare final engineering plans and technical specifications. The reclamation plan design has been completed and has been reviewed by DFWP, the Montana



Department of Highways (DOH), and the Montana Department of Natural Resources and Conservation (DNRC). Contract documents for construction were developed and construction commenced in June 1990.

Because of budget limitations, not all of the originally planned reclamation measures were accomplished in the 1990 project. The main items of work to be completed with available funds will be rehabilitation of the diversion channel and construction of a lower sediment dam, subsurface drainage system, and portions of an upstream cutoff wall.

The basic problem that exists at the Comet Mine calls for some sort of water treatment system to remove the high concentrations of heavy metals. The mine is located at a high elevation (approximately 6,400 feet, mean sea level) with adverse climatic conditions and lack of year-round accessibility. Therefore, the requirements for construction and continual maintenance of traditional water treatment systems preclude their use in this environment. The wetland system represents an approach that is inexpensive, requires little or no maintenance, and depends on natural processes for metal ion removal.

Several studies have been done that support the project. Based in part on these studies, and to prevent further degradation of the water and associated aquatic life, it is important that measures to reduce the concentration of heavy metals be implemented as soon as possible. The wetlands system would provide chemical and biological treatment of the drainage water, a logical second phase of treatment following the measures implemented during the 1990 construction.

If no action is taken, degradation of the streams will continue, resulting in further reductions in aquatic life.

#### FINANCIAL ASSESSMENT:

The Comet Mine Wetlands Development project is estimated to cost \$255,444. Of the total amount, \$4,744 will be contributed by the Montana Department of State Lands through in-kind grant administration. The remaining \$250,700 is requested from the Reclamation and Development Grants Program.

The budget breakdown is divided into four separate phases that coincide with the project schedule.

Task 1 - Grant Implementation Phase (\$4,744). This phase would be completed by DSL. Project administrative procedures, the DNRC grant agreement, and consultant(s) selection would be the priorities for this item.

Task 2 - Preconstruction Phase (\$25,700). This task would be performed by the consultant(s). The work involved would require the preparation of final drawings, specifications, bid packages, and permit applications. Bid solicitation and contract documents would be prepared for construction work.

Task 3 - Construction Phase (\$209,850). This item would involve the efforts of both the consultant and the construction contractor. The contractor would be responsible for building the design system, and the consultant would be responsible for the administration of the construction contract and for the construction inspection.

Task 4 - Postconstruction Phase (\$15,150). This phase would require the consultant to prepare the construction final report and assist the DSL project manager with DNRC grant closeout. System monitoring and maintenance schedules would also be developed and implemented.

Cost estimates provided appear reasonable for the work proposed.

#### ENVIRONMENTAL EVALUATION:

During construction, short-term adverse impacts, primarily sedimentation, would affect surface water quality. This impact would be mitigated by compliance with required permits. Noise and dust are other predictable short-term impacts, which in this instance should be of relatively minor consequence. Long-term adverse impacts are not anticipated. Net improvement in groundwater and surface water quality and aquatic habitat is predicted over the long term.

The project is designed to implement a long-term solution for remediation of the environmental damage created by previous mining activities. The objective is to prevent contaminants from the Comet Mine drainage from entering High Ore Creek. Achieving this goal would prevent the deterioration of downstream resources and property. The success of the project, or benefits derived, would be measured by active long-term water monitoring. Sampling of the water would give accurate records of the changes in quality that could be directly attributable to this project.

#### PUBLIC BENEFITS ASSESSMENT:

The project results would be used to further the technological knowledge of wetlands and their operation and capabilities. Comet Mine is typical of mountainous hard rock facilities, and this system may be used in similar situations. The results of the project may be utilized by state and federal agencies responsible for administering the reclamation of mining sites, universities, research organizations involved in the



advancement of wetland technology, and private or industrial enterprises that are actively pursuing the markets of mine reclamation and remediation.

Economic benefits could be realized through creation of an improved environment that would attract recreationists and provide additional tourist trade for the communities of Basin and Boulder.

RECOMMENDATIONS:

A grant of up to \$250,700 is recommended for this project contingent upon DNRC approval of the project scope of work and budget. Also, the implementation of this project must be consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Comprehensive Environmental Cleanup and Responsibility Act (CECRA).

- 19 -

APPLICANT NAME: Glacier County Conservation District

PROJECT/ACTIVITY NAME: Comprehensive Evaluation of Groundwater Contamination, Red River Drainage, Glacier and Toole Counties, Montana

AMOUNT REQUESTED: \$ 197,453

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 16,407
Montana Bureau of Mines and Geology	\$ 70,228

TOTAL PROJECT COST: \$ 284,088

PROJECT DESCRIPTION:

Glacier and Toole Counties in northwestern Montana contain thousands of oil and gas wells and together are a leading production area for oil and gas in Montana. The area is also a major producer of dryland wheat and barley.

Glacier County Conservation District is proposing to examine the extent of groundwater contamination due to oil-field and agricultural activities in the 55,000 acres surrounding the Red River Valley drainage. The goal of this study is to develop and increase awareness of land and water resource vulnerability.

Local understanding of these environmental problems can be a strong and lasting incentive to prevent pollution. The site evaluations and information dissemination proposed in this project are intended to develop this incentive.

Water wells, oil wells, and injection wells would be inventoried and mapped. A hydrogeological investigation would be performed at selected sites. Groundwater occurrence, flow, and pollution vulnerability would be assessed, with particular emphasis on those aquifers used for drinking water. Where water supplies are judged to be vulnerable, water samples would be collected and analyzed. A final report on accomplishments and conclusions would be prepared. All activities and reporting would be carefully coordinated to augment or assist existing programs by the Montana Salinity Control Association and the Montana Departments of Health and Environmental Sciences, Agriculture, Natural Resources and Conservation, and State Lands.

#### TECHNICAL ASSESSMENT:

Glacier County Conservation District has become increasingly concerned about potential groundwater contamination. Last fall (October 1989), it sponsored a two-day meeting and field tour. All interested and concerned citizens, organizations, legislators, and federal and state agencies were invited to Cut Bank to observe, discuss, and initiate a correction plan. Approximately 75 people attended the event. Most participants in the fall 1989 field tour recommended that the district undertake a comprehensive evaluation of all sources of groundwater contamination, starting with the 55,000-acre Red River drainage, where many of the worst problems have been observed.

There have been reports of leaking brine pits, breaches of pit safety berms, and bursting of crude oil production mains located in outwash gravels that serve as sources of drinking water. The report, *"Assessment of USDW Endangerment Potential in the Graben Coulee Field of Glacier County, Montana,"* prepared for the U.S. Environmental Protection Agency, documents vertical migration of Cut Bank formation water (with high total dissolved solids and chlorides) to the surface from around the production casings of two oil wells due to faulty seals between production piping and casing. The surrounding area was contaminated with hydrocarbons leaking from the production apparatus. Other problems may also exist.

A large number of saline seep areas, due to agricultural practices, have also been noted. Since current oil-field and agricultural activities pose a threat to groundwater quality, an assessment of the extent of contamination is necessary.

The cost of treatment of degraded groundwater far exceeds the cost of prevention. If future contamination can be prevented by a thorough understanding of the practices that cause groundwater contamination, thousands of dollars of public and private funds may be saved in treatment and monitoring costs.

#### FINANCIAL ASSESSMENT:

The principal investigator, an environmental engineer/hydrogeologist from the Montana Bureau of Mines and Geology, would conduct all aspects of the project, devoting 3/4 time. The principal investigator would be assisted by a graduate student, who would help with the overall evaluation and concentrate on the hydrogeological and petroleum aspects. The Montana Salinity Control Association would also assist, emphasizing the agricultural aspects.

Glacier County Conservation District is committed to becoming informed and eventually solving its own problems with community-wide involvement. All members of the district have volunteered and want to participate in the project. They would assist project personnel in getting permission to gather information; visiting with all landowners and oil-field operators; collecting samples; monitoring wells; helping select sites for detailed evaluation; drilling and monitoring sites; and coordinating meetings, workshops, and field tours to disseminate information and project findings. Non-RDGP contributions would account for \$86,635 of the total cost. Given the inventory nature of the project, the cost seems reasonable for the amount of work to be performed.

#### ENVIRONMENTAL EVALUATION:

The ultimate goal of this project is to prevent surface water and groundwater contamination. There is not likely to be any major adverse impact on the environment as a result of this well inventory and sampling proposal. However, monitoring wells could pose some impacts on water quality if not abandoned properly. Adherence to related regulations should mitigate any potential problem.

#### PUBLIC BENEFITS ASSESSMENT:

An obvious benefit would be the identification of possible public health threats due to inorganic, organic, or microbial contamination.

The project would also provide a basis for informed discussion between key groups regarding abatement measures, needed policy changes, or increased state agency efforts. A successful project would be an asset in the competition for funds for future water quality investigations. Pollution prevention



would prevent high treatment and monitoring costs. The public would be better informed so that they may influence decision makers and recognize that they themselves may be polluters.

The results of this study would provide an information base that would identify priority areas for water quality management. Information would help direct local efforts toward pollution prevention and remediation. State agencies might use the information to focus efforts. The project would assist the Montana Salinity Control Association and provide support data for the State Pesticide Survey. Data would be available to consultants and governmental agencies faced with cleanup operations.

#### RECOMMENDATIONS:

A grant of up to \$197,453 is recommended for this project contingent upon DNRC approval of the project scope of work and budget.

- 20 -

<u>APPLICANT NAME:</u>	Montana Department of Health and Environmental Sciences (DHES), Water Quality Bureau
<u>PROJECT/ACTIVITY NAME:</u>	Hydrogeology, Land Use, and Chemical Quality of Water Resources in the Clarks Fork Yellowstone River Basin, Montana
<u>AMOUNT REQUESTED:</u>	\$ 218,250
<u>OTHER FUNDING SOURCES AND AMOUNTS:</u>	
U.S. Geological Survey (USGS)	\$ 218,250
Applicant and the Montana Department of Agriculture (DOA)	\$ 35,000
<u>TOTAL PROJECT COST:</u>	\$ 471,500

#### PROJECT DESCRIPTION:

Shallow groundwater in the Clarks Forks Yellowstone River basin is used by most residents for drinking. All but 4 of the 24 regulated public water supply systems and nearly all of the domestic and stockwater supplies in Carbon County rely on shallow groundwater. In 1986, trace levels of aldicarb were detected in 6 of 17 wells sampled in the basin. Concentrations of the pesticide in groundwater did not exceed health advisory levels,



but the presence of agricultural chemicals in the groundwater indicated that the shallow aquifer is vulnerable to contamination.

State agencies are developing groundwater pollution prevention programs--specifically, pesticide management plans and wellhead protection programs--to eliminate or reduce the chances of contaminants entering vulnerable groundwater resources. Baseline hydrogeologic assessment information is necessary before prevention programs can be efficiently implemented.

The project area involves the Clarks Fork Yellowstone River basin, including Rock Creek, the major tributary to the Clarks Fork Yellowstone. Specifically, the project consists of the tasks listed below.

1. Compile existing data, acquire available Geographic Information System (GIS) coverage, and prepare base maps
2. Conduct field inventory of wells, land use, and water use
3. Digitize additional needed coverage for use in the GIS
4. Plan, install, and monitor 40 observation wells
5. Conduct tests to determine hydraulic characteristics of the alluvial aquifer
6. Measure streamflow gains and losses to determine relationships between groundwater and surface water
7. Sample wells and streams for water quality
8. Analyze data and prepare report
9. Conduct public information meetings

This study is designed to develop an understanding of the hydrogeologic flow systems in the Clarks Fork Yellowstone River basin, identify the extent of existing or potential groundwater contamination problems, identify vulnerable groundwater sources, and provide information necessary for resource managers and the public to make sound decisions regarding protection of water resources. Results of the study would be utilized by the public and agencies to design and implement optimum groundwater pollution prevention programs.

#### TECHNICAL ASSESSMENT:

The Clarks Fork Yellowstone River is thought to provide a "worst case scenario" in terms of potential for groundwater contamination from agricultural chemicals. The project would provide detailed hydrogeologic and land use practices information needed to evaluate this potential.

Some reviewers questioned whether 40 observation wells would be enough to accomplish potentiometric mapping of both the Clarks Fork Yellowstone River and Rock Creek, as proposed. The six

aquifer tests proposed would give a fairly spotty picture of aquifer characteristics, especially if distributed over both Rock Creek and the Clarks Fork Yellowstone drainages. The variation might be large, and more tests might be needed.

#### FINANCIAL ASSESSMENT:

The budget estimates appear to be reasonable for the proposed work. The first year of the project would be funded by DHES, DOA, and USGS. Total funding for the first year is expected to be \$70,000 for field inventory of wells, land use, and water use and planning activities. The second and third years of the project would be funded by this grant and USGS. The budget breakdown is shown below.

Salaries and wages	\$ 96,000
Benefits	19,300
Contracts	53,000
Supplies and materials	5,000
Communications	2,000
Travel	15,000
Rent and utilities	23,950
Equipment	2,000
Miscellaneous	<u>2,000</u>
TOTAL	\$ 218,250

Expenditures for salaries and wages include project management and supervision, project chief, part-time project technicians, clerical and administrative support, and technical assistance. Expenditures for contracts include drilling, USGS and DOA laboratory services, and printing costs. Expenditures for supplies include office supplies, laboratory and sampling supplies, and observation well completion materials. Expenditures for communications include telephone, mail, and computer network line charges. Expenditures for travel include vehicle rental and mileage and per diem costs for field work and project meetings. Expenditures for equipment include recorder rental, field inventory and sampling equipment, and computer support equipment.

#### ENVIRONMENTAL EVALUATION:

No adverse environmental impacts should result from this project. Non-implementation could result in groundwater contamination not being detected in the Clarks Fork Yellowstone River basin because hydrogeologic, land use, and chemical water quality information was not available.

### PUBLIC BENEFITS ASSESSMENT:

There is a great deal of public interest and concern regarding pesticide contamination. Benefits provided to the public would include a determination of the safety of the area's drinking water supply. The results of the project could be used as the basis for groundwater pollution prevention programs in this area, reducing the chances of future groundwater contamination. This study should also serve as a model for assessment of other areas where groundwater is vulnerable to contamination from pesticides.

### RECOMMENDATIONS:

A grant of up to \$218,250 is recommended for this project contingent on the following.

1. DNRC must approve the project scope of work and budget.
2. The geographic scope of the project must be limited to include only the Clarks Fork Yellowstone River aquifers. The study should not include Rock Creek unless specifically approved by DNRC.
3. The applicant must develop a pesticide management plan/wellhead protection plan and public education-information program aimed at the agricultural community.

-21-

APPLICANT NAME: Fort Peck Assiniboine and Sioux Tribes

PROJECT/ACTIVITY NAME: Extent, Magnitude, and Movement of Contamination in Unconsolidated Quaternary Aquifers in and near East Poplar Oil Field, Northeastern Montana

AMOUNT REQUESTED: \$ 290,400

### OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 17,960
U.S. Geological Survey (USGS)	\$ 290,400

TOTAL PROJECT COST: \$ 598,760

### PROJECT DESCRIPTION:

Contamination of drinking water wells was first reported to the Fort Peck Tribes' Office of Environmental Protection in November of 1988. Testing of samples from these domestic water wells during the investigation resulted in higher sodium and



chloride concentrations than the levels that were first recorded in 1985. From the comparisons of the water tests, it was evident that brine from oil-field development in the vicinity was contaminating these domestic wells. However, the type of oil-field activity that is affecting these wells cannot be determined without further investigation of the problem.

The general objectives of the proposal are to determine areas of contamination both vertically and laterally, to determine the chemical characteristics of the brine and the contamination, to determine the geochemical reactions that may occur, to determine the direction and velocity of movement of the contamination, to determine sources of the contamination, and to determine the effect of the contamination on other water resources in the unconsolidated Quaternary aquifers in and near the East Poplar oil field and also on the Poplar River.

The proposed project area includes approximately 70 square miles located 1 mile north of Poplar, Montana, on the Fort Peck Indian Reservation. Project activities would include field inventory of existing wells and potential brine sources; determination of the structure or topography of the top of the uppermost relatively impermeable layer; installation of about 20 observation wells, most of which would be completed in unconsolidated aquifers; chemical sampling and analysis of water from about 40 wells, various brine sources, and the Poplar River; and determination of the direction and rate of flow of the contamination by constructing flow nets.

#### TECHNICAL ASSESSMENT:

The purpose of the proposed project is to determine the extent, magnitude, and movement of brine contamination in the unconsolidated Quaternary aquifers in and near the East Poplar oil field. Specific objectives are:

1. Determine areas of contamination and the vertical and lateral extent of contamination in those areas
2. Determine the chemical characteristics of the brine and the contamination, including data on selected isotopes and selected trace halides
3. Determine possible geochemical reactions that may occur between the brine, uncontaminated groundwater, and aquifer materials
4. Determine the direction and, if possible, the rate of movement of conservative constituents
5. Determine the sources or source areas of the contamination
6. Determine the effect of the contamination on other water resources, such as the Poplar River



The results of an earlier U.S. Geological Survey (USGS) study indicate that brine from oil-field production is the probable source of sodium chloride contamination in the alluvial aquifer. Additional data collection is necessary to determine the areal extent of the contamination, rates of movement of brine in the alluvium, geochemical reactions that may occur between the brine and alluvium and result in precipitates, and changes in water quality with depth in the alluvium.

Answers to some of these unknowns may be found by using resistivity and electromagnetic geophysical techniques to isolate probable sources of the contamination plumes. To supplement these data, the location of all producing and disposal wells, dry holes, tank batteries, pipelines, and storage or evaporation pits needs to be determined. The quantity of brine and period of time that brine was injected into each disposal well also need to be determined.

An analysis of these data could isolate the point sources of contamination throughout the oil field. A detailed drilling and sampling program could then be undertaken to determine the magnitude of contamination and its lateral and vertical distribution from these point sources.

If sufficient data are obtained, contaminant transport models might be used to simulate the system. Depending on the degree of simulation that is achieved, the model could be useful in predicting the movement and residual effects of the contaminant through the alluvium down gradient from the oil field.

Final results of the project could be used by other resource managers who have oil and gas activity in their resource areas. "Fingerprinting" of brine water allows resource people to quickly identify the type of water contaminating the groundwater aquifer. The use of a surface conductivity meter for a large area allows the delineation of a plume without drilling expensive groundwater monitoring wells. Once the sources contributing to the contamination have been identified, steps could then be taken to mitigate the effects of the contamination. These steps could include various plugging efforts, as well as development of rules and regulations governing disposal lines and mud pits in heavily developed areas.

However, the question of what management response would be generated by the proposed data collection, whatever its results, is an open one. It appears unlikely that any agency or group would implement a serious reclamation program as a result of the study without additional grant funding from RDGP or some other source.

#### FINANCIAL ASSESSMENT:

Salaries and wages	\$ 180,090
Supplies and materials	28,018
Rent and utilities	28,018
Contracted services	35,400
Communications	9,889
Travel	7,485
Miscellaneous	<u>1,500</u>

TOTAL \$ 290,400

Costs are not well documented. Breakout of costs (\$290,400) contributed by USGS is not described in sufficient detail. The total project cost of \$598,760 appears high for the type and extent of investigation being proposed.

The project may receive funding from the Bureau of Indian Affairs and/or the U.S. Environmental Protection Agency (Section 106 grant).

#### ENVIRONMENTAL EVALUATION:

This project would have minimal impacts on the study environment. Drilling of groundwater monitoring wells would result in some minor surface damage. Proper abandonment of monitoring wells should mitigate any impact.

Minor archeological sites, mostly tepee rings of the Plains Indian tribes, have been discovered in the area. Agricultural practices in the area have heavily damaged much of the original land profile. No impacts to the archeology should result from this project as special care would be used if and when archaeological sites are located. The Fort Peck Tribes retain a person who inspects sites for archaeological and cultural significance and who would be retained for inspection services.

#### PUBLIC BENEFITS ASSESSMENT:

The most important public benefit from this investigation would be further identification of the source or sources of contamination. Once the source(s) are identified, appropriate agencies could then determine which actions could alleviate or moderate the contamination. If the project findings ultimately result in cleanup of contaminated surface water and groundwater, all Montanans would benefit from increased protection of their natural resources.

#### RECOMMENDATIONS:

A grant of up to \$290,400 is recommended for this project contingent upon DNRC approval of the project scope of work and

budget and submittal and approval of USGS budget detail and work plan. Please refer, however, to the comments regarding the need for transition from investigation to cleanup (found in the Technical Assessment).

- 22 -

APPLICANT NAME: Sheridan County Conservation District

PROJECT/ACTIVITY NAME: Extent of Oil-Field Waste Contamination in Lakes and Aquifers in Eastern Sheridan County

AMOUNT REQUESTED: \$ 134,736

OTHER FUNDING SOURCES AND AMOUNTS:

Montana Bureau of Mines and Geology (MBMG)	\$ 15,010
Soil Conservation Service (SCS)	\$ 2,000
Sheridan County	\$ 5,000
Applicant	\$ 5,700

TOTAL PROJECT COST: \$ 162,446

PROJECT DESCRIPTION:

Oil development and production in the Goose Lake field has resulted in extensive groundwater contamination near Goose Lake in eastern Sheridan County. The contamination was discovered in areas of Sheridan County with concentrated oil-field activity. The main sources of contamination are several buried reserve pits located in Sections 22, 27, and 28, T36N, R58E.

The primary objective of this project is to define the extent of contamination. The extent of the contamination would be defined by measuring water levels and water quality in vertically separated sand and gravel zones within the outwash deposit. These data would be interpreted to document the degree of hydraulic interconnections between the various sand and gravel zones. Once the extent of contamination is established, recommendations for mitigating the problem would be developed.

The project would be divided into three phases:

1. Definition of surface water and groundwater contamination near Goose Lake
2. Definition of contamination and potential contamination of deeper aquifers near Goose Lake



3. Development of recommendations and options for reclamation and mitigation of the contamination problem

The tasks would be performed over a two-year period. Preliminary work would include acquiring materials needed for field work and a literature search concerning reclamation methods. Electro-magnetic (EM) surveys would be conducted in the spring of 1992. Wells would be installed during the summer and fall of 1992. Water sampling and water level monitoring would begin as soon as the wells are installed. Recommendations and reclamation options would be evaluated on a continuous basis. It is anticipated that, as information is collected, reclamation options would be developed based on the new data. Reports would be periodically submitted, and a final report would be completed by December 1993.

The project described would follow up on the 1986 Sheridan County oil-field brine study by focusing more intensive study on one of the most concentrated areas of reserve pit contamination. The proposed study would investigate the details of contaminant transport, which appears to be complicated in this area by density-driven flow of heavy, saline brines and by interactions between a major groundwater aquifer (underlying a portion of Goose Lake) and Goose Lake.

TECHNICAL ASSESSMENT:

Understanding the transport of these contaminants is important because:

1. Previous work indicates that groundwater quality is impaired to the extent that beneficial uses are adversely affected or precluded.
2. The contaminated aquifer has a poorly understood relationship with the productive gravels of the Westby-Dagmar aquifer, for which a water reservation application is pending.
3. Surface water quality is apparently being affected by contaminated groundwater.
4. Density-driven groundwater flow identified in the previous study needs to be better understood to predict contaminant behavior at other brine sites in the region.
5. There is substantial interest in developing additional irrigation water from the Westby-Dagmar aquifer, both through the reservation and through individual permits. The water quality implications of pumping high yield wells in the vicinity of shallow brine-pit contamination of aquifers need to be better understood.



The study plan is somewhat nonspecific with regard to well locations and sampling points. This is necessitated by the study design, which incorporates preliminary geophysical surveying as a tool for locating well installations. This is a reasonable approach, but requires the budget to be generalized. The study plan and budget do appear to be adequate to define groundwater flow and hydrochemistry to a useful level. The final drilling and sampling plan should emphasize vertical gradients and groundwater-surface water relationships near lake boundaries.

Provision should be made for long-term maintenance or eventual reclamation of the project's monitoring wells. Generally, the project is justified and feasible from a technical standpoint. Detailed information of the type proposed would generally be needed to support contaminant management and remediation actions in complex aquifers with linked surface water bodies.

However, the question of what management response would be generated by the proposed data collection, whatever its results, is an open one. It appears unlikely that any agency or group would implement a serious reclamation program as a result of the study recommendations without additional grant funding from RDGP or some other source. The Water Quality Bureau of the Department of Health and Environmental Sciences is unlikely to have discretionary funding available for these types of sites. Oil-field wellhead sites are specifically excluded from the State Superfund Program, and there is no equivalent to the Abandoned Mine Lands Reclamation Program. The Board of Oil and Gas Conservation is charged with regulation of oil and gas activities and recently has initiated a systematic inventory, study, and cleanup of problem abandoned oil and gas operations that may be the logical funding source for this project.

It is the general impression of the reviewers that continued investigation of oil and gas impacts without commitment and funding for cleanup operations is not cost-effective. Absent this commitment, the conservation district should continue its efforts in working with appropriate regulatory agencies and industry to prevent future contamination and begin a systematic cleanup of abandoned operations.

#### FINANCIAL ASSESSMENT:

The total project budget is estimated at \$162,446 for the two-year duration of the project, including \$134,736 in requested RDGP grant funds and \$27,710 in matching funds and in-kind services. Sources of matching funds include the Sheridan County Conservation District, Sheridan County, Montana Bureau of Mines and Geology, and Soil Conservation Service.

Personnel costs are based on projected 1990 salary levels, with 33 percent added for benefits. A graduate stipend for research support is budgeted at \$4,000 per year.

Travel costs are estimated at \$0.25/mile for administrative travel and \$0.36/mile for travel requiring field vehicles. Per diem is estimated at \$40.00/day.

Office expenses would be charged at cost. The Sheridan County Conservation District office would be used as a base of operations for the project, and 25 percent of its rental expenses would be committed to the project as in-kind services.

Drilling costs would be on a per-day basis, not including travel and mobilization. Two mobilizations would be required, one in each year of the project. The drill would be a Mobile B-50 auger rig, capable of drilling, sampling, and well installation to a maximum depth of 100 feet. For deeper wells, a mud rotary drill would be contracted from the Sheridan County area. The auger drill is considered to be faster and more economical than a rotary in conditions for which it is suited, such as are anticipated for this project.

Test well materials include 6,000 feet of 2-inch casing at \$0.38 per foot, 50 pails of bentonite tablets at \$35.00/pail, and 8 yards of fine gravel pack at \$50.00/yard. All prices are quoted assuming delivery to the Plentywood area. Miscellaneous expenses (e.g., well shelters) are estimated at \$600.

Nonexpendable water testing equipment includes a conductivity meter, a pH meter, and two complete water sampling and filtration outfits (messenger bailer, in-line filter outfit). Expendable supplies include filters and Quantabs.

Equipment rental is estimated as follows:

EM-31	2 months at \$1,000/month
EM-34	2 months at \$1,500/month
Geodimeter level	2 months at \$600/month

Costs, particularly project administration costs (\$13,400), are estimated on the high side. Because the focus of this project is primarily research (conducted by MBMG), these costs should be reevaluated and apportioned accordingly.

#### ENVIRONMENTAL EVALUATION:

Major adverse impacts are not anticipated from this research project. Short-term impacts would be minimal and primarily involve vehicular transport to and from sites. Monitoring wells need to be properly abandoned upon completion of the study.

#### PUBLIC BENEFITS ASSESSMENT:

If the project findings result in cleanup of contaminated surface water and groundwater, the benefits would be substantial. If, however, the study results are not acted upon, it would become another scientifically interesting research project. It might be prudent to wait and see what becomes of recommendations for oil-field cleanups made in several other previous studies.

#### RECOMMENDATIONS:

A grant of up to \$134,736 is recommended for this project contingent upon DNRC approval of the project scope of work and budget. Please refer, however, to the department's comments regarding the need for transition from investigation to cleanup (found in the Technical Assessment).





## CHAPTER IV

### SUMMARIES OF PROJECTS NOT RECOMMENDED FOR FUNDING

Following are summaries of proposals that are not recommended for RDGP funding.

- 23 -

APPLICANT NAME: Butte-Silver Bow Government  
PROJECT/ACTIVITY NAME: Upper Clark Fork River Basin Coordinator  
AMOUNT REQUESTED: \$ 171,806  
OTHER FUNDING SOURCES AND AMOUNTS:  
Applicant \$ 737  
TOTAL PROJECT COST: \$ 172,543  
PROJECT DESCRIPTION:

The 1989 legislature (HB 329) approved hiring an issues and technical information coordinator for the upper Clark Fork River basin who would:

(1) provide policy, procedural, and technical information, as appropriate, to local government officials and citizens of the upper Clark Fork River basin to enable them to effectively participate in decisions concerning the assessment, management, and rehabilitation for the water and aquatic resources of the basin; (2) evaluate technical assessments prepared by state and federal agencies for purposes of determining environmental problems related to contaminated soils and water, potential health risks for citizens of the basin, and preferred options for accomplishing rehabilitation; and (3) participate in meetings and other activities with state and federal agency personnel and other parties concerning the management and rehabilitation of the basin's water and aquatic resources.

An appropriation was further approved to Butte-Silver Bow in the amount of \$100,000 covering a two-year period. The current application proposes to extend the coordinator position for an additional two-year period.

#### TECHNICAL ASSESSMENT:

Essentially there are two issues surrounding the use of RDGP funds to fund the coordinator position. The first is whether the coordinator provides information and services otherwise not available to the local governments, and the second is whether these services should be funded in the long term by the state or by the local governments affected.

Regarding the first issue, the Butte/Anaconda community is endowed, perhaps more than any other community in Montana, with an impressive assortment of scientists, educators, legislators, government and industry officials, and local citizens who have committed themselves and their expertise to solve local problems. The Citizens Technical Environmental Committee is a case in point and provides a fine example of the spirit and cooperation needed to address the concerns and issues relative to Superfund remedial action. It is not apparent how the proposed position would enhance these efforts beyond what is already available.

Second, the general function of the coordinator--to evaluate, inform, and recommend--is no different from that of many personnel currently employed by the Butte-Silver Bow and Anaconda local governments. If circumstances and need dictate additional employees over the long term, it would seem appropriate to meet these needs using local resources. The uncertainty of RDGP funding from year to year argues against depending on it as a stable, continuous source of funding for this position. Continuity seems a critical component of position effectiveness.

#### FINANCIAL ASSESSMENT:

The budget breakdown is as follows:

Salaries and wages	\$ 3,471
Employee benefits	895
Contracted services	<u>167,440</u>
TOTAL	\$ 171,806

The proposal for 1992-1994 increases the number of hours per week from 25 to 35, which would increase current level funding from \$100,000 to \$171,806. The contracted services (\$167,440 of the \$171,806 requested) are for the cost of the coordinator. This

figure translates to \$46 per hour, which is not unreasonable for consultant services of the type proposed. Given the uncertainty of position need and urgency, cost-effectiveness is questionable.

ENVIRONMENTAL EVALUATION:

The hiring of this position would not directly impact the environment.

PUBLIC BENEFITS ASSESSMENT:

If funding this position were the only alternative for informed and effective public and local government participation in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, the benefits would be considerable. This does not appear to be the case.

RECOMMENDATIONS:

No funding is recommended for this project.

- 24 -

APPLICANT NAME: Montana College of Mineral Science and Technology/Center of Excellence

PROJECT/ACTIVITY NAME: Pilot Plant Treatment of Contaminated Water from the Berkeley Pit

AMOUNT REQUESTED: \$ 299,879

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 299,879

PROJECT DESCRIPTION:

The applicant proposes that a treatment plant will be needed in the near future to treat water from the Berkeley Pit in Butte, Montana. Before a full-sized plant can be designed and built, treatment processes must be evaluated and perfected at the pilot plant scale.

As the result of an ongoing laboratory test program at Montana Tech, a treatment process for Berkeley Pit water has been developed and is proposed for pilot plant testing. The process is fairly simple and relies on existing methods of water treatment. In brief, it utilizes selective neutralization and oxidation to produce, first, a disposal sludge containing sulphate, aluminum, iron, and arsenic, and then two valuable sludges containing zinc and a zinc-manganese mixture. Copper is



recovered in a pretreatment step using cementation with iron. Residual manganese and sulphate are removed using permanganate oxidation and ion exchange. The final product is water that meets applicable discharge standards and so can be used or discharged safely.

Construction and operation of this pilot plant would enable knowledgeable, timely design and construction of a full-sized treatment plant. Commercial scale operation of such a plant would help preserve water quality in the Butte basin and ultimately the entire Clark Fork Valley by preventing contamination of groundwater and surface waters with acidic, metal-laden mine water.

In addition, the pilot plant would develop methods of recovery of valuable metals from Berkeley Pit water, reducing the volume of waste sludge to be disposed of and defraying treatment costs. These by-products could also be a feedstock for value-added products, creating jobs and increasing the tax base.

Results of this pilot plant work would be distributed to interested parties, including the public, as promptly as possible.

#### TECHNICAL ASSESSMENT:

Research, sponsored by the U.S. Bureau of Mines (USBM) Generic Center Grant #G1175149-3022, is ongoing at Montana Tech on treatment methods for pit water, and this proposal is based on results of that research. To date, the research has developed a chemical model of the pit and devised a treatment method based on neutralization with limestone, aeration, and further neutralization. The process produces a disposal sludge containing the bulk of the iron, sulphate, and arsenic in pit water and separate sludges containing the bulk of the zinc and manganese, which are of economic interest. Copper is recovered in a pretreatment stage using iron cementation. Some preliminary results of this research have been published by the Bureau of Mines and Geology.

Many design parameters cannot be established by laboratory testing. These include actual capacity of plant equipment, quantities of reactant chemicals needed in practice, and dosages of flocculants and other auxiliary chemicals used. Laboratory testing is unable to adequately model process return circuits and chemical buildup caused by them. Finally, problems that are trivial at the bench scale, such as reactor and pipe clogging caused by scale formation, can turn out to be very troublesome in a full-scale plant. Pilot plant testing can identify these difficulties and provide an opportunity to correct or at least develop methods of dealing with them before designing a permanent plant.



A full-size plant would likely require about two years to build with another six months for startup and shakedown. Design would require a full year before construction could even start. This pilot plant should be fully operational about 6 months after it is authorized and funded, and at least 18 months of operation are needed to obtain all the information needed for good design. This adds up to a minimum of five and one-half years between the pilot plant authorization and full-sized plant operation. If the full-sized plant is needed in 1997, pilot plant work should start in 1991.

The process developed for this pilot plant may not be the best of all possible means for cleaning pit water. It is, however, simple and effective, and it relies on well-understood methods. The pilot plant is intended to have a high degree of flexibility so that other promising methods can be tried and evaluated for use at any stage of the process.

This pilot plant is intended to help finish research directed toward developing a practical process for treating pit water to produce water meeting applicable drinking water/discharge standards and to recover the valuable metals. Since the volume to be treated is large and a plant must run for many years, simple processes are preferred over more advanced ones that require careful control and highly skilled operators.

#### FINANCIAL ASSESSMENT:

Costs appear reasonable; they include:

Salaries and wages	\$ 65,833
Employee benefits	21,725
Contracted services	33,885
Supplies and materials	11,900
Communication	800
Rent and utilities	11,200
Equipment	144,036
Miscellaneous	<u>10,500</u>

TOTAL	\$ 299,879
-------	------------

The preliminary design, including equipment specifications and cost estimates, was prepared by Montana Tech engineering personnel. Design assumptions and methods reflect commonly accepted practices.

There are no funds being contributed by the applicant or other sources.

## ENVIRONMENTAL EVALUATION:

The construction and operation of this pilot plant would have little direct effect on the environment, although the ultimate objective, a full-sized treatment plant, is intended to prevent a major degradation of water quality extending downstream from Butte through the entire Clark Fork Valley.

The pilot plant would be located at the Mineral Research Center. Other pilot plants have been and are being operated at the center, developing processes applicable to coal cleaning, metal and nonmetallic ore processing, and environmental cleanup.

The only new construction would be that of the on-site sludge and clean water ponds, both of which would be lined to prevent leakage. These would be 60 by 60 feet and 39 by 39 feet in size, respectively. The ponds are designed with ample capacity to hold spills and product water of suspect quality, as well as waste sludge and water for process use.

## PUBLIC BENEFITS ASSESSMENT:

The purpose of this plant is to provide information sufficient for detailed design, including cost estimation, of a full-scale plant. As such, the main measure of success would be the eventual ability of the plant to routinely treat pit water and produce clean water. In order to do this, the operators would have to thoroughly understand all the operating variables in the plant. These include throughput rates at all stages of treatment, reagent dosages and best points of reagent addition, effects of auxiliary reagents such as alternate oxidants and flocculants, and required residence time in all stages. In addition, various operational problems would arise and must be controlled if the plant is to run smoothly and efficiently.

The plant would be a success if the plant performs its task of cleaning pit water and the plant personnel can explain thoroughly and plainly the methods used.

## RECOMMENDATIONS:

No funding is recommended for this project. Although the department recognizes and supports the need for evaluation of new technology for treatment of Berkeley Pit water, the department questions whether RDGP is an appropriate forum for this activity. It would appear that Berkeley Pit solutions are better confined to regulatory agencies and the responsible party, with appropriate opportunity for public review and comment. Additionally, the department has recommended funding for Butte-Silver Bow's WASTEC application. The concept of WASTEC would appear to accommodate the type of proposal described by Montana Tech.

APPLICANT NAME: Montana Department of State Lands (DSL)  
PROJECT/ACTIVITY NAME: Cataract Creek Reclamation Project  
AMOUNT REQUESTED: \$ 171,771  
OTHER FUNDING SOURCES AND AMOUNTS: None  
TOTAL PROJECT COST: \$ 171,771

PROJECT DESCRIPTION:

The Cataract Creek Reclamation Project includes three sites located in the Cataract Creek drainage in Jefferson County, Montana. Cataract Creek is a tributary of the Boulder River. The mines included in the project are the Crescent Mine, located in the headwaters of Cataract Creek, and the Morning Glory and Mantle Mines, located in downstream positions near the confluence of Cataract Creek with the Boulder River.

The purpose of the project is to correct environmental and public health problems due to mine wastes lying adjacent to Cataract Creek and its tributaries. The mine dumps and associated workings create environmental hazards by contributing contamination to surface waters in the form of dissolved metals and fine grained material. This contamination enters the surface water system by various mechanisms including direct discharge of mine waters from underground workings, seeps emanating from the base of tailing and rock dumps as a result of poor drainage characteristics and minimal vegetative cover, and erosion and transport of fine grained sediment from dumps adjacent to ephemeral and perennial streams.

The proposed reclamation plan includes removing debris, removing and regrading mine waste, applying lime, providing topsoil, installing a drainage system, fertilizing and seeding, applying vegetative mulch and erosion control blankets, and installing fence. Reclamation at the project site is intended to result in an improvement in water quality in Cataract Creek and the Boulder River, elimination of safety hazards, and improvement of the aesthetics of the area.

TECHNICAL ASSESSMENT:

Stream sampling for water quality and flow measurements by the Montana Department of Fish, Wildlife and Parks (DFWP) determined that Cataract Creek is the largest source of copper and zinc to the Boulder River. At the mouth of Cataract Creek, in the spring and early summer of 1985 and 1986, zinc and copper



concentrations ranged from less than detection to 0.45 mg/l and from 0.01 to 0.10 mg/l, respectively. Amounts of zinc and copper loading per day ranged from 1.8 to 85.0 kg/day and 0.24 to 37.3 kg/day, respectively. Aquatic life in Cataract Creek is particularly vulnerable to metals toxicity due to the low pH, hardness, and alkalinity of the water. In 1986, the U.S. Environmental Protection Agency's aquatic life standards for zinc and copper were exceeded by an average of ten times and seven times the recommended concentrations, respectively.

At this time, no health hazards directly related to water quality in Cataract Creek or the Boulder River have been established. However, human health hazards do exist in the proximity of at least one site (Morning Glory), due to elevated levels of metals concentration in fine-grained mill tailings. The most obvious and principal effect of mine pollution in the drainage has been a reduction in the aquatic life standards for the river.

Further investigations of Cataract Creek basin have identified several abandoned mine sites that contribute significant amounts of contamination to Cataract Creek. The sites, listed in order of decreasing impact to the basin's watershed, are Crystal Mine, Morning Glory Mine and Mill, Eva Mae Mine and Mill, Mantle Mine, and Crescent Mine. In 1987, DFWP applied for and received a small (\$21,565) RIT grant for reclamation activities on the Crystal Mine. Lack of landowner cooperation has excluded the Eva Mae Mine and Mill from the pending grant application.

DSL has generally documented the environmental, health, and safety hazards present in the Cataract drainage basin. However, more site-specific data, particularly water quality data, are needed. Design criteria for reclamation at the Crescent Mine are noticeably missing, as is a detailed monitoring plan to judge project performance. Without these data, the effectiveness of the various designs treatments is speculative at best.

#### FINANCIAL ASSESSMENT:

DSL is requesting grant funds for the entire amount of the project (\$171,771). All services for this project would be awarded to qualified contractors and engineering consultants. Generally, the budget breaks out as follows:

Engineering/administration	\$ 29,231
Construction	132,540
Monitoring	<u>10,000</u>
TOTAL	\$ 171,771



Engineering--i.e., final design, permitting, bidding, inspection, and administration--is overestimated given the remaining work to be performed. Additionally, construction time frames listed for this project are too long (four and one-half months). Significant savings could be attained by starting construction in late August or early September, which would still allow for fall seeding (30-45 days). Construction cost estimates seem high but fluctuate widely. They are not excessive. Monitoring costs cannot be evaluated due to lack of information. Assuming two or three sample points at each site and adequate frequency, duration, and analysis to judge project performance, monitoring should be attainable for \$10,000. Though DSL has obviously spent considerable funds in site assessment and design activities, these contributions are not listed.

#### ENVIRONMENTAL EVALUATION:

Short-term impacts, primarily sedimentation, can be mitigated by careful design, scheduling, and adherence to permit requirements. Short-term adverse impacts such as dust emissions, noise, and an increase in traffic may occur during the reclamation process. Long-term adverse impacts are not foreseen.

Net improvements to the environment--i.e., water quality, aquatic organisms, vegetation, and wildlife habitat--are unknown. However, long-term environmental impacts from the reclamation would be positive and include improved water and land quality. Wildlife and fisheries would potentially benefit from the project by the creation of more habitat through revegetation and water quality improvement. The extent of expected benefits is not clear.

#### PUBLIC BENEFITS ASSESSMENT:

Reclamation activities at the proposed site are intended to benefit downstream domestic and agricultural water users through improved water quality. The public would benefit from an increase in recreational areas and opportunities because of the regraded and revegetated lands, which would create additional wildlife habitat. Finally, private individuals or public agencies proposing to reclaim areas with similar disturbances could use the results of reclamation techniques employed at the project site to assess adequacy and effect.

#### RECOMMENDATIONS:

No funding is recommended for this project.

APPLICANT NAME: Montana College of Mineral Science and Technology/Department of Biological Sciences

PROJECT/ACTIVITY NAME: Constructing Artificial Bogs and Wetlands in the Uncle Sam Gulch/Cataract Creek Area to Remediate Present Damage and Mitigate Future Damage Due to Acid Mine Drainage From the Crystal Mine, Northern Jefferson County, Montana

AMOUNT REQUESTED: \$ 239,877

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 73,975
Job Corps (still negotiating)	\$ 125,000

TOTAL PROJECT COST: \$ 438,852

PROJECT DESCRIPTION:

Solving problems of acid mine drainage (AMD) has become a priority for communities across Montana: the damage wrought upon the environment where past mining activities have taken place has adversely affected the economy of the state, the health and safety of its residents, and, in many cases, entire regional ecosystems (the upper Clark Fork basin is a case in point). AMD also occurs in alpine riparian environments where remote mining activities have taken place (and continue to take place), often with major detrimental effects on the environment. The drainage below the Crystal Mine in Northern Jefferson County exhibits just such damage. Uncle Sam Creek, into which AMD from the Crystal flows, is for much of its length devoid of aquatic life, and the streamside habitat is also in poor condition. The water is loaded with heavy metals (arsenic, zinc, and iron) and suffers from very low pH (2.8 to 3.5) and heavy turbidity.

A three-year technology demonstration project is proposed to mitigate AMD damage to the Uncle Sam Gulch drainage and demonstrate a low-cost, low-maintenance method that may be used in similar situations elsewhere in the state. The project would first characterize the present conditions in Uncle Sam Gulch as they relate to the presence of AMD. Then a series of artificial bogs and wetlands would be designed and constructed to entrap the contaminants and treat them in a series of circuits that imitate the chemical cleansing activities of naturally occurring bogs and wetlands that have precipitated iron and other metals and neutralized highly acidic water flowing through them. The installations would be constructed in a series of relatively

small cells with anticipation of the periodic need to replace the organic substrate (the "boggy" material) once it becomes saturated with contaminants.

Work would begin in July 1991 and would continue seasonally on site and year-round for the planning and development phases. Construction would take place in the second year and, if necessary, extend into the third year. The third year would focus on monitoring the effectiveness of the systems, fine-tuning them to optimize their operation, and disseminating results as widely as possible for the greatest benefit of the public.

#### TECHNICAL ASSESSMENT:

The proposal has several major shortcomings. First, the applicant does not discuss previous research concentrating on treatment of AMD in Montana or elsewhere. These data and research findings are critical to the design of AMD treatment systems.

Secondly, the proposal does not explain why a passive system (wetlands) is the preferred alternative for this site. Active treatment systems and use of hydrologic controls were not considered, or only very briefly. Additionally, the rationale as to why wetlands are the preferred passive treatment for this site is not clear. Increased discussion on the benefits and liabilities of other passive systems--e.g., neutralization, aeration, biosorption, chemical adsorption, etc.--at this site is needed.

Thirdly, the design of the wetland system being proposed is unclear. An evaluation of previous wetland construction in Montana and other states is needed to properly design the system proposed here. Numerous difficulties, other than those generally alluded to by the applicant, have been encountered elsewhere. It appears that the applicant's proposal is very similar to research at the Big Five Tunnel initiated in 1987 by the Colorado Department of Health and Colorado School of Mines, and, if so, the applicant should draw on this experience in designing the current project.

In summary, the proposal is not clear in revealing why the proposed system was chosen or exactly how it would be designed, constructed, maintained, and monitored.



## FINANCIAL ASSESSMENT:

The RDGP budget is broken down as follows:

Salaries and benefits	\$ 159,467
Contracted services	33,750
Supplies and materials	6,500
Communications	3,900
Travel	8,310
Rent and utilities	2,400
Equipment	15,050
Miscellaneous	<u>10,500</u>
TOTAL	\$ 239,877

Salaries and benefits (principal investigator, \$69,528; graduate students, \$60,300; and secretary, \$29,639) are high, particularly given the amount of published work on wetland construction. A literature search and evaluation should have been conducted before selecting the technology and design for this project. Air travel and per diem to three national meetings (\$3,750) are not adequately justified, nor are equipment expenditures of \$15,050. In short, the budget leaves many unanswered questions as to need and reasonableness.

## ENVIRONMENTAL EVALUATION:

The project involves construction activity in a stream channel and as such would be expected to have short-term impacts primarily associated with sedimentation. Impacts may be associated with substrate material--i.e., stock manure and sewage sludge; these need to be evaluated by regulatory agencies. Careful design, regulatory oversight, and timing of construction should mitigate these impacts. The question of substrate disposal needs to be evaluated by the Department of Health and Environmental Sciences as to the presence of potentially hazardous substances.

Overall, the project is intended to have a positive long-term impact on water quality, aquatic life, and recreation. A successful project would realize these objectives.

## PUBLIC BENEFITS ASSESSMENT:

The public benefits of a successful project would be both immediate and far reaching. The project aims to rehabilitate a seriously damaged riparian habitat. It would provide jobs and job training in the construction phase and could possibly open more mining opportunities if a low cost method of mitigating impacts from mining activities is achieved. However, the potential for success for this project is low because of technical shortcomings in the proposal.



RECOMMENDATIONS:

No funding is recommended for this project.

- 27 -

APPLICANT NAME: Montana College of Mineral Science and Technology

PROJECT/ACTIVITY NAME: Detoxification of Acid Mine Drainage from Berkeley Pit Waters Using Chelation Affinity Chromatography

AMOUNT REQUESTED: \$ 269,710

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 12,000
Industrial donors	\$ 33,320
(Funding for related project requested from the U.S. Environmental Protection Agency--no estimate of time for decision)	

TOTAL PROJECT COST: \$ 315,030

PROJECT DESCRIPTION:

The natural oxidation of metal sulfide ore bodies in abandoned and working metal mines produces sulfuric acid laden with dissolved toxic metals such as lead, cadmium, copper, arsenic, and others. This acid drainage can adulterate the surface water and aquifers to cause environmental problems at abandoned and active mine areas. Recent fish kills in the Clark Fork River drainage were traced to spillage of such metals from abandoned settling ponds of former mining activities. The Berkeley Pit in Butte, Montana, is part of a very large Superfund site and is filling with this acid mine water at the rate of over 7 million gallons per day. The metals in this water must be removed to allow downstream discharge into the headwaters of the Clark Fork River. Addition of lime solution can remove most of the metals, but the process leaves a residual sludge that must be disposed. Counter current extraction with organic chelating solutions is another method of treatment. This process can contaminate the water with organics due to foaming, emulsion formation, and other interfacial problems.

ChromatoChem, Inc., has developed a method of immobilizing a chelating group on a solid silica support. Initial studies indicate that use of this stationary support will remove metals

without the problems associated with the liquid extraction process mentioned above. The purposes of this proposed research are to:

1. Build and demonstrate a small pilot plant with a feed rate of one gallon per minute of water from the Berkeley Pit
2. Determine the feasibility of this process for removing metals from mine waters and allowing direct discharge into the surface system
3. Obtain engineering data for plant design and commercialization by interested parties

In addition, the stability of the support and use of various chelating groups on the support would be studied.

The anticipated results of this proposed research are to:

1. Show the practicality for the removal of toxic metals from acid mine drainages, yielding an environmentally acceptable discharge into surface waters
2. Obtain a concentrated solution of the metals that may be further treated (electrowinning) to recover the metal values

#### TECHNICAL ASSESSMENT:

ChromatoChem, Inc., the co-investigator, has proprietary technology for immobilizing chelating agents on silica supports. The technology involves coating a porous silica surface with a chemically stable hydrophilic polymer linker molecule. The terminus of the linker is activated and then coupled with an appropriate chelating molecule.

The objective of this research is to demonstrate this chelation technology in a small pilot plant operation and obtain engineering design data to develop a scaled-up process for commercialization. The anticipated result is the development of a process to remove heavy metals from acid mine waters. The metals separation and concentration steps of the process could conceivably make metal recovery an economically viable process. Economic feasibility will be reviewed and evaluated by industrial partners who are interested in commercialization or use of the technology. Commercialization time frames are not mentioned.

Overall, there is general agreement that this type of project, along with others, is needed before Berkeley Pit waters enter underground aquifers and surface water of the upper Clark Fork River basin. There are numerous alternatives for treating Berkeley Pit waters, however, that are not adequately addressed in this proposal, implying that this research is the only viable alternative. It would help answer some of the questions about

the extraction of metals by silica, but whether this technology is the most viable solution or alternative is conjecture at this point. Without the results of intensive field investigations, laboratory analyses, and data evaluations of these alternative technologies, which are noticeably absent from this proposal, reviewers are hesitant to recommend the level of funding requested here.

An additional point to consider is that the U.S. Environmental Protection Agency (EPA) must select the appropriate technology alternative pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act.

Other concerns, briefly, center on analytical parameters of the high performance liquid chromatograph (HPLC), level of coordination with the Department of Health and Environmental Sciences and EPA, equipment purchases, salaries and wages, public vs. private benefits, location and function of two laboratories, need and urgency, number of separation columns, level of involvement by various researchers, and outside funding sources. In general, the proposal is loosely defined and needs further clarification and expansion in a number of areas.

#### FINANCIAL ASSESSMENT:

The budget breakdown submitted does not provide sufficient detail to evaluate its reasonableness. For example, under Contracted Services is the statement that "laboratory personnel, equipment and space are being leased at a cost of \$45,000," when personnel are already budgeted under Salaries and Wages. Laboratory space would also be rented at Montana Tech for \$1,000/month. This creates confusion as to where the research would be conducted and by whom. If the research would be conducted at Montana Tech, it seems that spending \$70,000 to purchase the HPLC and associated pumps and columns is unwarranted. Given the amount of use it would receive in this project, it should be rented. (The inductively coupled plasma [ICP] and atomic absorption [AA] instruments, which would be used more than the HPLC, are being rented for a cost of \$9,000.) The level of effort and duties (salaries and wages) were not explained for the following: principal investigator (\$14,500), laboratory chemist (\$12,000), co-investigator (\$3,000), technician (\$15,000), secretary (\$15,000), and student help (\$16,000). The cost of silica (\$5,000/kg) seems excessive.

Additional contributions from industrial donors (\$33,320) and EPA are uncommitted presently. The applicant lists \$12,000 as its contribution (4 percent of the overall project cost). Scale-up of this process is dependent on yet unidentified parties.



ENVIRONMENTAL EVALUATION:

No adverse environmental impacts are anticipated during this research project.

PUBLIC BENEFITS ASSESSMENT:

Public benefits of this project are difficult to quantify. It would provide useful information to agencies and other researchers searching for viable acid mine drainage treatment alternatives. If results of this research lead to successful commercialization, the public benefits would then be a function of site-specific conditions and cost-effectiveness. In the project as proposed, it would appear that most benefits would accrue only to the private company cosponsoring the project.

RECOMMENDATIONS:

No funding is recommended for this project.

- 28 -

APPLICANT NAME: Montana State University (MSU),  
Department of Animal and Range Sciences

PROJECT/ACTIVITY NAME: Pyrite Amendments to Improve Plant and  
Animal Nutrition

AMOUNT REQUESTED: \$ 96,114

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 80,300
Placer Dome Mine and Golden Sunlight Mine	\$ 9,200

TOTAL PROJECT COST: \$ 185,614

PROJECT DESCRIPTION:

The applicant proposes to demonstrate the use of a mine waste (concentrated pyrite) as a resource to increase plant sulfur uptake, which should then potentially increase yield and oil quality of canola and increase sulfur content of native range plants. The latter would potentially improve the diet quality of cattle grazing native range and crop aftermath during the fall and winter.



Pyrite is an iron sulfide mineral that commonly occurs in many nonferrous metal mining operations. Although it can be separated during the mineral extraction process, pyrite is usually discharged in tailings with other waste materials and thus is not considered a resource in the United States. However, pyrite has reputedly been successfully used in Europe, Australia, and India as a plant nutrient source for iron and sulfur. It is also used to reclaim saline and sodium-affected agricultural soils.

In Montana, tailings impoundments of non-operating mines contain significant amounts of pyrite that are a potential source of acid drainage. For operating mines with pyritic tailings, pyrite can be separated from waste streams and potentially used as a resource rather than becoming a potential source of acid generation and subsequent contamination.

The applicant intends to demonstrate the usefulness of pyrite as a source of sulfur for plant and livestock nutrition. Pyrite applied at appropriate rates to range and croplands may benefit range and crop plants by increasing plant sulfur uptake and soil micronutrient availability, and may increase sulfur intake by animals. In this proposed project, range and crop plants would be amended with pyrite or gypsum, a traditional sulfur source. The amount of pyrite applied would be determined by loading rate guidelines for contained metals. Plant growth and nutrient content would be determined at seasonal intervals for range and crop species. In turn, the amended range plants would be evaluated for their potential as an organic sulfur supplement for livestock.

Specific project objectives are to demonstrate:

1. The effectiveness of pyrite and gypsum sources of sulfur in increasing plant sulfur uptake
2. How enhanced sulfur uptake increases the yield and oil quality of canola
3. How enhanced sulfur uptake affects the phenology, structure, productivity, and sulfur content of native range
4. How enhanced sulfur in plants affects diet quality and grazing behavior of cattle grazing native range and crop aftermath

#### TECHNICAL ASSESSMENT:

The problems are fairly well outlined, and most technical aspects of this proposal appear to be detailed. However, there are several concerns about the project. For example, the

question of toxic metals or other contaminants in the pyrite is not addressed adequately. The proposal briefly mentions a potential for adverse effects from metal loading with pyrite applications. The pyrite from the Golden Sunlight Mine is supposed to have only minor amounts of metals. This is the only source that would be tested; a sampling of pyrite from other mine wastes is not planned.

Although the proposal would thoroughly investigate the effects of sulfur fertilization on canola production, the proposal makes a generalization about investigating the phenology, structure, productivity, and sulfur content of native range. Native range is usually composed of a diverse plant community. The proposed study would investigate the effects of sulfur fertilization on only two native range grass species, bluebunch wheatgrass and Idaho fescue.

The study plan is designed to meet most of the stated objectives, but some of the reasons for planned activities are not explained. The applicant does not explain why the use of gypsum, a traditional sulfur source, is needed to demonstrate the value of pyrite. The use of gypsum would be helpful in comparing the effects of traditional and nontraditional sulfur fertilizers on soil pH. This comparison should have been a stated objective in the proposal. Also, the reasons for the nitrogen fertilization treatments are not explained, and the treatments add significantly to the complexity of the study. These seemingly extraneous nitrogen treatments appear to answer questions not directly related to the problems of acid mine drainage from pyrite, canola production, and livestock nutrition.

Because of the poor discussion of alternatives in the proposal, reviewers were not able to identify the tradeoffs incurred in choosing among a set of alternative investigation strategies. This is a major deficiency in the proposal. The proposed alternative appears to be a "shotgun" type of research with many different treatment combinations and measurement parameters. The proposal, reviewers felt, could be designed with fewer variables and measuring devices.

Lastly, an important issue to address in studying the feasibility of pyrite application is the cost of transport of the material in quantities large enough to significantly reduce acid production at mine sites. The statement that "transportation and application would be minimal costs incurred by the user" is not well supported. Since transport and other costs are a main factor in assessing project economics, they need to be well described and documented.

### FINANCIAL ASSESSMENT:

The budget appears to be reasonable for the work proposed. The highest costs are 43 percent for salaries and wages and 41 percent for contracted services. The RDGP cost breakout is shown next.

Salaries and wages	\$ 41,300
Benefits	2,360
Contracted services	39,444
Supplies and materials	5,100
Communications	1,100
Travel	2,450
Rent and utilities	360
Equipment	2,000
Miscellaneous	<u>2,000</u>
TOTAL	\$ 96,114

### ENVIRONMENTAL EVALUATION:

The potential positive environmental impact would be removing a source of acid contamination from waste piles and dispersing and diluting it over the landscape. Reviewers were doubtful that there would be large enough quantities of pyrite removed to have a positive effect on water quality. It is possible that agricultural productivity and range vegetation would be improved. There is a potential for adverse effects from metal loading with pyrite amendments. MSU states that application rates would be well below U.S. Environmental Protection Agency guidelines, but there are no details on these safeguards.

### PUBLIC BENEFITS ASSESSMENT:

Plant productivity could be increased, contributing to more efficient canola and beef production. If the pyrite waste adds sulfur to the soil, the need for energy-intensive traditional fertilizers could be reduced. A feasible project could potentially benefit both the agriculture and mining industries. The removal of pyrite from waste piles would reduce the risk of water pollution, but there is doubt by reviewers that demand for pyrite would be high enough to result in the removal of enough of the waste to have a measurable effect on water pollution.

### RECOMMENDATIONS:

No funding is recommended for this project.



APPLICANT NAME: Yellowstone County  
PROJECT/ACTIVITY NAME: Yellowstone County LIS/GIS Project  
AMOUNT REQUESTED: \$ 284,633

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 311,297
Soil Conservation Service	\$ 8,454

TOTAL PROJECT COST: \$ 604,384

PROJECT DESCRIPTION:

Yellowstone County is proposing to develop a county-wide Land Information System/Geographic Information System (LIS/GIS). A LIS/GIS is an automated database used to store, update, manipulate, and display all types of spacial information. Examples of types of information that can be part of a GIS are floodplain maps, irrigation districts, land zoning boundaries, sewer systems, and comprehensive plans. Statistics show that approximately 90 percent of the decisions by the Yellowstone County government involve geographic information.

The following items are a description of the tasks to be accomplished.

1. Train two Yellowstone County employees in the Global Positioning System (GPS), a uniform three-dimensional system of surveying that uses a satellite to plot the grid system. This system will allow the county to coordinate databases with various federal agencies.
2. Identify hardware and system software that can merge with the existing system while quantifying specific application needs. Purchase and install hardware.
3. Train three county personnel in the operations of the LIS/GIS and database management functions.
4. Convert spatial data and attributes into a digital form that can be used by LIS/GIS. This includes digitizing the features found in orthophoto quads, printed maps, and aerial photographs and translating existing digital data into a GIS.



5. Maintain, improve, expand, update, and revise any portion of the GIS-based system. This objective takes into account that ongoing staff training will be required in order to be successful.

#### TECHNICAL ASSESSMENT:

Without question, an interdepartmental GIS would be beneficial for Yellowstone County. By implementing a GIS the applicant would be breaking new ground in Montana and serving as an excellent case study for other counties. It appears there is considerable support for the GIS project among various county departments, which is crucial to a successful project.

The process by which the county would develop a GIS is not well documented in the application. In general, the county has not presented a clear plan of how it would proceed with the project. For instance, the applicant did not identify which department would be served first. No pilot project to get the GIS off the ground is specified. Early products to be produced by the GIS, and how these products would directly relate to current county functions and operations, are not stated.

Reviewers' experience with other GIS projects has shown that the county's time lines are probably too short. For example, four months to convert "all" spatial information is unrealistic, as are one month for GPS survey computations and two 1-month intervals for staff training.

Another major concern is training. If designated staff would go to off-site training to learn a specific (but undefined) software product, the travel budget is too low. On the other hand, if the county would rely on consultants to conduct training on site, there could be an overdependence on outside people. This could hinder the chances of the county's developing sufficient in-house expertise to implement a successful GIS in the long run.

The staffing plan also caused some concern. The personnel services budget indicates that a data processing coordinator would handle the GIS as part of other duties. This underestimates the amount of work involved in getting a GIS up and running, maintaining its functions, and serving the diverse applications that will arise. A full-time GIS coordinator for the county is recommended. The coordinator should have interdepartmental authority, perhaps reporting directly to the commissioners.

In summary, it was found that the technical aspects of this proposal were somewhat difficult to assess. There is a lack of detail specific to Yellowstone County. There is ample

information about the benefits of a GIS in general, and how those benefits would serve the county. How the project would unfold and be implemented are not clearly outlined.

#### FINANCIAL ASSESSMENT:

The RDGP portion of the budget is:

Contracted services	\$ 46,800
Communications	4,800
Travel	1,758
Rent and utilities	14,120
Equipment (hardware and software)	<u>217,155</u>
 TOTAL	 \$ 284,633

In general, the budget is loosely documented. It was not possible to evaluate all the costs since the applicant has not defined system needs and requirements. Presumably, the applicant has done some research toward defining system needs, but these calculations are not included in the application. Specifically, there is no detail on the \$289,540 investment for hardware and software, 75 percent of which would be paid by the grant. Also, it appears there was no money budgeted for hardware to link all county departments.

#### ENVIRONMENTAL EVALUATION:

The proposed project won't result in the construction of facilities or any activity that would negatively impact the environment. Positive impacts would be expected from better land and natural resource management decisions based on the improved data and maps obtained through the LIS and GIS.

#### PUBLIC BENEFITS ASSESSMENT:

Overall, this application begins to define an excellent project for Yellowstone County, and the county planners should be applauded for making a move in the direction of automation and a GIS. The primary beneficiary of this proposal would be Yellowstone County and its resident taxpayers. For them, there is a need to develop GIS capability, and from the standpoint of computer advancements (i.e., the longer one waits, the harder it will be to implement this type of system), it is somewhat urgent for the county to develop a GIS.

While it is true that there would be concrete benefits resulting from this project, it is not clear what would happen or how the county would proceed if grant funds were not made available. The relationship between county functions and reclamation or environmental issues is not described.

An RDGP grant could divert attention from the substantial long-term costs of sustaining a GIS. The costs of a GIS-based system continue. Long-term staffing changes must be made consistent with the move to GIS-based operations, jobs must be redefined, and all departments must budget for GIS tasks in the long term.

RECOMMENDATIONS:

No funding is recommended for this project.

- 30 -

APPLICANT NAME: Homestead Acres Water and Sewer District

PROJECT/ACTIVITY NAME: Bootlegger Mine Reclamation Project

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 12,204

TOTAL PROJECT COST: \$ 312,204

PROJECT DESCRIPTION:

This application is being presented by Montana Peoples Action and the Mountain Patrol Search and Rescue of Cascade County. Both are not-for-profit organizations seeking a resolution to a long standing safety and health hazard to the community of Bootlegger Trail. Sponsorship for this grant was sought and obtained from the Homestead Acres Water and Sewer District.

The site is located approximately 3 miles north of Great Falls on the Bootlegger Trail. It consists of an abandoned surface mining operation locally known as the "shale plant," which was used in the past for extracting and processing shale aggregate used in lightweight blocks and prestressed concrete beams.

The applicant proposes to totally reclaim the site into a natural habitat for private, public, or commercial use. Construction includes the removal of all man-made fixtures, pits, pilings, and wastes above and below ground. A site study to determine the existence of man-made fixtures, deposits, or wastes not visually evident and the removal and disposal of those wastes may have to be completed.



The project involves surface contouring, re-establishment of native and introduced vegetation, and the addition of top soil to ensure vegetation survival.

Once completed, the restoration of this site would eliminate potential environmental concerns regarding groundwater quality, erosion, runoff onto the agricultural lands and wetlands to the south, and health hazards from the structures present. Increased wildlife habitat and improved aesthetics and water quality are some of the stated benefits.

Construction activities would be performed by reclamation contractors and supervised by designees of the Mountain Patrol Search and Rescue (vested owner of the property).

Progress reports, supervision, accounting, and documentation would be performed by the search and rescue organization.

#### TECHNICAL ASSESSMENT:

The application provides few specifics regarding reclamation options and associated costs. The general nature of work proposed involves removing and disposing of wastes, debris, etc.; recontouring; topsoiling; and revegetation--all of which are relatively straightforward, basic approaches to reclamation and site cleanup. A contractor's construction cost estimate (\$348,000) provided by the applicant is excessive for the work being proposed. Substantial cost savings could be expected in recontouring and topsoiling, for instance. No mention is made of how the sale of salvageable materials could help offset construction costs. The ultimate use of the reclaimed land is not identified.

Beyond the obvious technical deficiencies in the work plan, however, are the issues of public benefits, crucial state need, and project urgency. Arguments supportive of these benefits and needs are not persuasive.

The land parcel proposed for cleanup was donated to Mountain Patrol in June 1984. Mountain Patrol intended to salvage salable materials and use the land as a financing tool for search and rescue operational costs, etc. Using the funds received from salvage for land improvement and cleanup is not mentioned. Certainly an influx of public funds would accelerate and improve the financial condition of Mountain Patrol--principally in terms of increased land value and decreased liability for potential property-related injuries and nuisance actions. Whether this is a crucial state need and is urgent to others besides the search and rescue unit is doubtful.



In summary, the general consensus of reviewers evaluating this proposal is that private improvements are not an intended goal of RDGP. The responsibility for land improvement and cleanup was undertaken by the owner at the time of deed conveyance and should not be relieved by RDGP funding.

#### FINANCIAL ASSESSMENT:

Cost estimates are not documented in sufficient detail to assess their reasonableness. One estimate apparently given by an area contractor does not describe how cost estimates were derived. For example, an estimation of the quantity of work to be completed (in cubic yards excavated, acres revegetated, acres topsoiled, cubic yards hauled, etc.) and use of a unit price bid from similar projects are needed. Material and work requirements would require appropriate and standard engineering practices. This information is specified by RDGP in its application requirements. In short, these requirements were not followed.

#### ENVIRONMENTAL EVALUATION:

One goal of the project is to return the area to its natural condition. In doing so, water, soil, vegetation, and wildlife habitat should improve. Minor short-term impacts would occur during construction activities, principally noise, dust, and pollution from construction equipment, and soil and vegetation disruption from equipment and workers going to and from the site. Two other potential reclaimed uses were listed, also, including a rural home site and a public park. Though impacts to these uses should be short-term and minimal, not enough information was provided in the application for a full evaluation.

#### PUBLIC BENEFITS ASSESSMENT:

Site improvements would improve local aesthetics and reduce the potential for off-site impacts on soil, water, and vegetation. Benefits could accrue to residents of a neighboring subdivision who contend the project site is an eyesore. Indirectly, the search and rescue unit would be better able to direct funding received (from donations and salvage) to its service operations rather than to site cleanup.

#### RECOMMENDATIONS:

No funding is recommended for this project.

APPLICANT NAME: Judith Basin County

PROJECT/ACTIVITY NAME: Development of Iron Ore Deposit

AMOUNT REQUESTED: \$ 297,000

OTHER FUNDING SOURCES AND AMOUNTS:

U.S. Forest Service	\$ 15,000
EKPA, Inc. (private)	\$ 15,000

TOTAL PROJECT COST: \$ 327,000

PROJECT DESCRIPTION:

EKPA, Inc., is the holder of 43 patented iron ore claims near Stanford, Montana. The corporation is proposing to use RDGP funds to determine the quality and quantity of this deposit, commonly referred to as the Running Wold Iron Ore Deposit. If the results of this survey and core drilling program are encouraging, EKPA plans to contract for professional consultants who would then conduct an economic feasibility analysis relative to siting a direct reduction iron plant and/or steel mill. An environmental assessment of mining the ore body and constructing and operating a reduction plant and/or mill would also be performed, as would a feasibility study to evaluate construction of a 15-mile-long railroad connecting the plant to Burlington Northern facilities at Stanford. An intended projected strategy is to attract investors using feasibility data and information.

The project concept involves creation of jobs, increase in the state and federal tax base, and improvement to Judith Basin County's overall economy. The applicant (county) would not be involved directly or indirectly. Administration of grant funds would be handled by the local Resource Conservation and Development (RC&D) office.

TECHNICAL ASSESSMENT:

The applicant and EKPA, Inc., maintain that the project is critical to Montana's economy and represents an opportunity to capture extraordinary benefits that would otherwise be lost. Although the application lacks required documentation from authoritative sources supporting this claim, it is not difficult to realize that job creation and expanded economic opportunity benefit all Montanans. Rather, the difficulty is in determining, from the sketchy information presented, what the likelihood is that this particular project would fulfill these needs.

Detail is insufficient in all aspects of the proposal-- i.e., public benefits, technical description, budget, need and urgency, and project management and organization. With the exception of the technical description and associated construction budget (which would be detailed during the feasibility and design phases using RDGP funds), this information should be available. Though time consuming, gathering this information and supporting documentation is critical to assessing project success.

The unknown quality and quantity of the reserves and the limited financial commitment risk by EKPA are seen as major drawbacks in this proposal.

#### FINANCIAL ASSESSMENT:

The budget lacks documentation. All expenses--salaries, benefits, travel, equipment, etc.--are shown in a lump sum under the Contracted Services category. No information is given as to how the contractor costs were derived. Determining the quantity and quality of the ore deposit would cost \$57,000. The remaining \$240,000 in the budget is for the following studies: economic feasibility, marketing, project design, and environmental impact.

#### ENVIRONMENTAL EVALUATION:

The exploration (core drilling) phase of this project poses potential impacts to the environment. Such activities would be governed by the Department of State Lands, Reclamation Division. Adherence to permit requirements and/or enforcement of same would mitigate these impacts. The feasibility phases of this project are not expected to directly impact the environment. If the project progresses to construction, Montana Environmental Policy Act provisions would apply, and permits and licenses would be required from appropriate regulatory agencies.

#### PUBLIC BENEFITS ASSESSMENT:

The public benefits claimed are the generalizations that jobs would be created and the local, regional, and state economies benefited. Verification of these benefits or the methodology used to make this claim is not possible from the information submitted. It does appear that private benefits would accrue to EKPA in that corporation funds would not have to be spent assessing the project's feasibility.

#### RECOMMENDATIONS:

No funding is recommended for this project.



APPLICANT NAME: Montana State University (MSU),  
Department of Biology

PROJECT/ACTIVITY NAME: Trout Stream Restoration from Placer  
Mining and Flood Damage

AMOUNT REQUESTED: \$ 91,438

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 43,994

TOTAL PROJECT COST: \$ 135,432

PROJECT DESCRIPTION:

The applicant proposes to further evaluate results of a previous fish habitat improvement project funded by a 1985 RIT grant. Located near Townsend, this 1985 project was completed in 1988 and involved installation of 40 log sills, to help restore trout habitat from placer mining damage in Confederate Gulch, and installation of riprap and tree revetments, to help stabilize severely eroding streambanks in Deep Creek. Funding for evaluation of both projects will expire in spring 1991. The objective of this current proposal is to obtain funds to complete the postconstruction evaluation for three years using established monitoring procedures and equipment.

TECHNICAL ASSESSMENT:

The applicant's methods for trout stream restoration and bank stabilization offer some needed new approaches to fish habitat enhancement. Postconstruction physical changes will continue to develop for many years following construction of the project. Therefore, to continue monitoring for three years may be too brief a period. There is a general feeling that less detailed monitoring for a longer period would be more appropriate. For example, evaluation could take several approaches:

1. Evaluate the overall effectiveness of the project approximately 10 years (and several major flow events) after initial construction (a one-time-only basis), or
2. Evaluate gross changes--e.g., every 3 to 5 years, or after significant spring runoff events for a period of 10 years.

The significant management implications of this research project are primarily the long-term durability of these structures and their ability to positively affect the trout



population. The most inexpensive way to gather this information may be simply to wait five years (or until more normal flow patterns occur) before returning for analysis. The necessary follow-up measurements could be made by the Department of Fish, Wildlife and Parks fisheries biologist assigned to the area or as part of a master's thesis. These alternatives were not evaluated by the applicant.

#### FINANCIAL ASSESSMENT:

The RDGP budget breakdown is as follows:

Salaries and wages	\$ 64,985
Employee benefits	7,028
Contracted services	4,000
Supplies and materials	1,700
Communications	250
Travel	5,475
Miscellaneous	<u>8,000</u>
TOTAL	\$ 91,438

The total cost of this work, \$135,432, seems excessive. It is not documented why five people (two principal investigators, a graduate research assistant, a technician, and hourly help) are needed to complete a limited number of trout surveys and stream measurements.

#### ENVIRONMENTAL EVALUATION:

Any major disruption would have occurred with the installation of the sills and bank revetments. No significant disturbances are anticipated due to the evaluation procedures. Positive impacts on the fishery, streambank stabilization, and, to a lesser degree, improved water quality would be expected results from the original project. The evaluation would verify the actual results.

#### PUBLIC BENEFITS ASSESSMENT:

The public would ultimately benefit from knowing if these rehabilitation treatments are effective. There are many more miles of stream in need of rehabilitation that could use the methods being evaluated here, but the evaluation could probably be accomplished by a less detailed and less expensive design.

#### RECOMMENDATIONS:

No funding is recommended for this project.

APPLICANT NAME: Montana Bureau of Mines and Geology  
(MBMG)

PROJECT/ACTIVITY NAME: Hydrogeologic Characterization of  
Landfill Sites in Montana

AMOUNT REQUESTED: \$ 226,767

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant \$ 52,721

TOTAL PROJECT COST: \$ 279,488

PROJECT DESCRIPTION:

The objectives of this investigation are two-fold. First, a determination would be made for as many as eight landfill sites as to the potential for groundwater contamination. Second, the information obtained from each of the selected landfill sites would be used to predict the groundwater contamination impacts from similar landfills located in areas of like hydrogeologic setting. The intent is to aid state agencies and landfill owners/operators in determining (1) the location and number of monitoring wells required for a given landfill site, and (2) the site locations for future landfills.

An inventory of all existing landfill site locations and local geology would be compiled. This inventory would be used to establish a general classification of landfill sites based on typical hydrogeologic settings. From this master list, four to eight sites would then be considered for field investigations. The field investigation objective is to evaluate the potential for groundwater and surface water contamination attributable to the landfill. At each site four to six groundwater monitoring wells would be installed upgradient from the site to obtain background water data. The monitoring well installation phase would also include the collection of core samples during drilling and well development.

A groundwater and surface water sampling plan would be devised and implemented for each site. Groundwater elevation and groundwater quality data would be collected for each site throughout the duration of the project. In the event leaks were detected in the landfill, an attempt would be made to establish the extent and nature of the groundwater contamination. Groundwater recharge and discharge areas, as well as the interaction between groundwater and surface water, would also be identified.

## TECHNICAL ASSESSMENT:

There is a recognized need for more and better information regarding landfill hydrogeology in Montana. The problem of landfill-generated water quality degradation is adequately described. There are definite economic and environmental advantages to understanding landfill hydrogeology at a site before acute contamination occurs.

There are, however, several misleading or inaccurate statements in the proposal. For example, since the passage of the Montana Environmental Policy Act (MEPA) nearly 20 years ago, the Department of Health and Environmental Sciences (DHES) has legally been required to evaluate the potential for groundwater contamination as part of the landfill licensing process. In addition, HB486, enacted in 1989, requires owners/operators of landfills serving a geographic area including 5,000 or more persons to monitor groundwater according to DHES specifications. The applicant did not address how its proposal may complement or overlap with monitoring under MEPA and HB486.

The significance of the information that would be developed from this study is unclear. Generalizations about landfill behavior based on hydrogeologic setting are probably not possible for many of the site-specific questions of importance to landfill management. Those broad features that may be possible to generalize probably have implications for landfill siting and operation that are already fairly well understood. While a short-term field investigation might obtain useful information about the particular sites investigated, it is doubtful that these data could be usefully extrapolated to other sites. The proposal is not convincing that the project would provide anything more about the benefits and liabilities associated with different hydrogeologic settings than is currently known. In fact, much of the information generated concerning individual landfills will soon be required of landfill operators regardless, under federal and state regulations.

Generally, it appears doubtful that the study as proposed would meet the objective of significantly aiding health agencies in managing the large pool of landfill sites in the state. It appears the coordination between the applicant and the principal state regulatory authority (DHES/Solid and Hazardous Waste Bureau) could have been better. There is no letter of support from DHES. No documentation of crucial state need is included.



## FINANCIAL ASSESSMENT:

The RDGP budget breakdown is as follows:

Salaries and wages	\$ 62,920
Employee benefits	20,764
Contracted services	89,490
Supplies and materials	17,500
Communications	200
Travel	16,333
Rent and utilities	9,560
Equipment	8,000
Miscellaneous	<u>2,000</u>
TOTAL	\$ 226,767

The budget doesn't reflect a range of costs depending upon how many landfills would actually be studied. The grant application summary form indicates four to six sites would be studied, while the abstract says six to eight would be studied. The technical description says the final number of sites chosen would be determined by the number of different hydrogeologic settings representative of all or most of the landfill sites in Montana. How this would unfold is unclear.

The project coordinator would be a graduate research assistant. An hourly salary of \$15 seems high. It's not clear why an accountant is needed three hours/week. Contracted services for well drilling, sampling, materials, and travel are not prorated on the number of sites to be sampled. Salaries comprise about one-third of the total budget and appear high. Overall, the budget is not well documented.

## ENVIRONMENTAL EVALUATION:

The short-term environmental consequences of aquifer testing at contaminated sites were not addressed by the applicant. There is a documented need for improved information concerning hydrology of landfills in order to protect against groundwater contamination. Water quality could be protected or improved as a result of gathering this type of information, but reviewers doubted that this project would be appropriate or adequate for addressing that need.

## PUBLIC BENEFITS ASSESSMENT:

It is probable that the principal beneficiaries of this project would be the landfill operators whose sites were chosen for monitoring wells and water quality sampling. They would be saved the expense of monitoring when new regulations requiring



monitoring go into effect. The project's drilling and sampling may approximate that which will soon be required of operating landfills by state and/or federal law.

RECOMMENDATIONS:

No funding is recommended for this project.

- 34 -

APPLICANT NAME: Deer Lodge Valley Conservation District  
PROJECT/ACTIVITY NAME: A Feasibility Study of the Use of Timber Industry Wood Wastes for Reclamation of Mine-Impacted Areas

AMOUNT REQUESTED: \$ 59,535

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 5,600
Louisiana Pacific Corp.	\$ 400

TOTAL PROJECT COST: \$ 65,535

PROJECT DESCRIPTION:

The effects of mining and smelting emissions in southwestern Montana, particularly the Butte to Milltown Dam area, have been well documented. Over 100 years of mining have taken their toll on the soils and water of the upper Clark Fork drainage. Fish kills in the summers of 1988 and 1989 attest to the continued contamination of streambank and riparian soils.

Along with mining problems, the wood wastes from area sawmills are growing in size and creating potential fire, storage, aesthetic, and pollution problems. The sawmills within southwestern Montana, as well as throughout the state, are continuing to have problems disposing of the low-value wood waste.

Headwaters RC&D Area, Inc., would be contracted by the applicant to evaluate the technical feasibility of and market supply and demand for using composted wood wastes to satisfy the top-soiling requirement for mined land reclamation and find a solution to the wood waste disposal dilemma. The project would evaluate: (1) market feasibility, (2) technical feasibility of composting wood wastes, and (3) treatment effectiveness of using composed wood wastes in mined land reclamation.

## TECHNICAL ASSESSMENT:

The project, or problem to be solved, is to utilize wood waste. It is tied to revegetation of an area disturbed by past mining by proposing that the product (wood waste compost) be evaluated on such a site.

The application does not detail past efforts to develop composting facilities or to use compost in the rehabilitation of disturbed sites. The authors allude to, but never specifically address, the past use of compost to help revegetate disturbed lands. Eko-Compost in Missoula has successfully shown that its compost can help revegetate disturbed sites. Worldwide, composting has been shown to be a valued method of reducing organic wastes to a useful product. Therefore, the proposed field study to demonstrate that compost is useful and valuable to re-establishment of vegetation would be a repetition of studies that have been carried out in Montana and worldwide. Compost will enhance the establishment of vegetation on disturbed sites.

The main problem of compost use is transportation cost to the point of application. The material is light, and tons per acre are required. The economic feasibility of compost use could be determined by a competent economist in a short period of time.

## FINANCIAL ASSESSMENT:

The RDGP budget breakdown is as follows:

Salaries and wages	\$ 4,680
Employee benefits	1,560
Contracted services	39,900
Supplies and materials	2,890
Communications	4,805
Travel	2,700
Equipment	<u>3,000</u>
TOTAL	\$ 59,535

The project uses contracted services to complete the majority of all three phases. Only \$400 of the total \$65,535 budget is to be provided by one of the mills, which stands to benefit most from this project if it is successful. The costs of this project appear to far exceed the benefits.

## ENVIRONMENTAL EVALUATION:

The study portion of this project would not have any impacts on the environment. The field portion is less clear. There is the potential for decomposed wood wastes, if placed in a floodplain, to enter the stream and exert an oxygen demand. This impact needs to be evaluated more thoroughly.

PUBLIC BENEFITS ASSESSMENT:

The timber industry would benefit most from this project. The public could indirectly benefit aesthetically and economically.

RECOMMENDATIONS:

No funding is recommended for this project.

- 35 -

APPLICANT NAME: Yellowstone County Conservation District

PROJECT/ACTIVITY NAME: ZooMontana Construction Fund Drive

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant (fund-raising efforts)	\$3,000,000
ZooMontana Family of Boards	500,000
The Billings Gazette	175,127
The Brown Foundation	100,000
Burlington Northern Foundation	50,000
Montana Power Company	30,000
Plum Creek Timber Co.	25,000
Junior Women's League (ZooMobile)	25,000
Campaign teams and unsolicited gifts	269,723
DNRC, Renewable Resource Development Program grant (pending)	100,000

TOTAL PROJECT COST: \$4,574,850

PROJECT DESCRIPTION:

The ZooMontana Capital Campaign Committee is leading a \$4.5 million fund drive to build a natural habitat zoo and botanical garden along Canyon Creek just east of Billings. ZooMontana was established as a private nonprofit corporation in 1982. Since then, a downtown Billings office has been established, three full-time staff hired, and a land-use master plan completed. The 70-acre site has been deeded from the State of Montana, and site construction has begun. The first phase animal exhibits have been selected, and designs for the zoo's first major building, the Education/Administration Center, are being completed. Construction of a second bridge across Canyon Creek, pathways, and infrastructure began last spring. Major construction on buildings and exhibits will move forward as funding is secured.



The \$300,000 requested from RDGP would be used to construct the sewer/wastewater system, wells and water distribution system, and perimeter fence. (A \$100,000 Renewable Resource Development Program grant has been requested from DNRC for streambank reinforcement measures on Canyon Creek.) The water distribution system would serve the entire zoo campus and the freshwater needs of the animals, visitors, and botanical gardens. Septic tanks and water wells will be used until ZooMontana is able to connect with city water lines. For the safety of visitors and exhibit animals, a perimeter fence is essential in ZooMontana's first phase development.

Over \$1,800,000 has been raised toward this project. The organization has established a Capital Campaign Committee that has successfully raised over 40 percent of the \$4.5 million needed to construct a world-class zoo. Financial and public support for the zoo has been obtained in four ways: (1) capital campaign, (2) outreach education program, (3) "experience" exhibits, and (4) annual ZooGrass Festival benefit. Additionally, ZooMontana has received in-kind commitments of services, furniture, equipment, labor, and lumber that will save ZooMontana thousands of dollars once construction begins. It is foreseen that the state's investment in ZooMontana will stimulate increased private investment.

#### TECHNICAL ASSESSMENT:

DNRC commends ZooMontana's efforts to bring an outstanding educational opportunity to the people of Montana, but, according to criteria adopted in RDGP administrative rules, the ZooMontana Construction Fund Drive does not qualify as a "crucial state need." "Crucial state need" means a set of circumstances or conditions that require action to prevent or eliminate severe and unacceptable damage to public resources or to capture extraordinary benefits that would otherwise be lost. It appears that the project has a high likelihood of success with or without the requested construction funding. RDGP funds may accelerate project completion, but will not make or break the effort.

#### FINANCIAL ASSESSMENT:

The budget is well documented and reasonable. ZooMontana is a well-managed organization with demonstrated fiscal responsibility. This grant would help accelerate construction of the zoo's first phase. ZooMontana's funding request is shown below.

Sewer/wastewater system	\$ 150,000
Wells and water distribution	120,000
Perimeter fencing	<u>30,000</u>
TOTAL	\$ 300,000



### ENVIRONMENTAL EVALUATION:

Activities associated with construction of the sewer/wastewater system and the water distribution system would likely have minor short-term impacts, primarily noise, dust, compaction of soils, and vegetative disturbance. Without knowledge of surface and subsurface conditions and detail of final design for the various structures planned, further impacts cannot be fully assessed. The applicant intends to hook up with city water/sewer service in the next three to five years. The fencing is not likely to have any adverse impact on the environment.

### PUBLIC BENEFITS ASSESSMENT:

Initially, the zoo would provide 11 new jobs on the site and an estimated 72 new jobs indirectly. The "ripple" effect ZooMontana would create in the eastern Montana economy would be significant and immediate. Conservative visitor estimates indicate that 130,000 people would visit ZooMontana each year. Tourism is a major economic force. The proposed zoo would, without a doubt, increase the number of tourism dollars spent in the local community (Billings). Additionally, it would generate revenues for other towns and businesses, as people travel to this attraction. This project provides an ideal opportunity to creatively develop Montana's economy. The total economic impact of the zoo on the region is estimated to exceed \$6 million per year.

The Rocky Mountain region has over 50,000 children who would be served by ZooMontana. Many children in this region may otherwise never have the opportunity to see the exotic Siberian tiger or the majestic grizzly bear. These animals are accessible to most Montanans only through zoos. A great number of the students in this state have never been to a zoo, since the cost of travel and distance make it prohibitive. There is an increasing public desire in Montana for this type of quality educational and family recreational opportunity, as evidenced by the success of ZooMontana's ZooGrass Festival (over \$55,000 raised), the Montana Fair Exhibit (over 100,000 visitors), and ZooMontana's Education Outreach Program (over 45,000 served).

### RECOMMENDATIONS:

No funding is recommended for this project.

APPLICANT NAME: Town of Hot Springs

PROJECT/ACTIVITY NAME: Reutilization of Hot Springs Mineral  
Water Resource

AMOUNT REQUESTED: \$ 300,000

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 47,000
Montana Department of Commerce (pending)	350,000
U.S. Department of Energy/ Bonneville Power Administration (BPA) (pending)	40,000
Hot Pool Committee	45,000

TOTAL PROJECT COST: \$ 782,000

PROJECT DESCRIPTION:

Hot Springs is a small, incorporated town located in Sanders County on the Flathead Indian Reservation. The history of this community has evolved around the hot springs' mineral waters that have been used for their therapeutic properties since long before Montana was a territory. Over the past 90 years, the outward appearance of and accommodations at the springs have changed many times. The town has historically depended on the springs for a major part of its economic stability.

A large bathhouse was constructed at Camas Hot Springs in 1948. At the time energy costs were not a large consideration. Over the years, however, rising energy costs and lack of proper management led to increased losses, and the facility was closed in 1986. Since that time, the town of Hot Springs has lost many other small businesses whose lifeline was the tourist trade generated by the springs. The loss of these businesses, coupled with the loss of the bathhouse, have led to higher unemployment, lower standards of living, loss of school enrollments, and a very depressed tax base.

In April 1989, a group of local businesses formed a non-profit corporation, Cam Redevelopment Corporation, Inc., in hopes that their joint efforts could revitalize a once thriving community. They are looking to the mineral springs once again as a non-polluting industry to enhance the area economy. A rehabilitated hot springs is expected to play an important role in attracting tourists, as people from all over the United States, Canada, and Europe who have used the springs in the past continue to inquire about them. If properly developed, this area

could become a major destination resort with resulting beneficial impacts on Montana's tourist industry. The corporation sought and obtained sponsorship of this proposal by the Town of Hot Springs.

Cam Redevelopment Corporation, Inc., has secured a 25-year lease on the property and buildings with an option for an additional 25 years from the Confederated Salish and Kootenai Tribes. The tribes are very supportive of the project but unable to assist financially. The project has wide community support and has raised over \$10,000 locally.

The applicant would use the \$300,000 in RDGP funds for construction only. Total construction cost is estimated at \$766,950 and includes:

1. Olympic-size mineral water pool for therapy, recreation, education, and exercise classes
2. Several hot mineral therapy pools
3. Saunas and steam rooms
4. Showers and locker rooms
5. Cooling area with mineral water and juice bar
6. Energy-efficient, geothermally heated building

Construction is scheduled to be completed over a six-month period. The corporation will pursue private financing for lodging, restaurant facilities, and a golf course.

#### TECHNICAL ASSESSMENT:

It is entirely logical for the Town of Hot Springs to seek economic rejuvenation through rehabilitation of the old resort. Other hot springs sites in the state do (at least sometimes) make money and buoy local economies. The physical characteristics of Camas Hot Springs probably limit the types of alternative development possible. Reservoir temperatures are far too low for power production, for instance (as in all western Montana geothermal systems), and flow rates are too low to consider industrial applications such as the ethanol project that has been contemplated at nearby Camp Aqua for several years. It is commendable that local residents and business people are willing to contribute their own resources to the efforts.

The proposed project itself, however, seems almost too skeletal to be judged intelligently at this point. The applicants evidently have not hired an engineer yet to design the geothermal features of the complex. The only drawing included in the application is a very basic floor plan (which appears not to incorporate a number of elements described in the text of the application).



Another feature of the proposal that needs better definition is exactly how the proposed complex would be marketed to potential customers. Hot Springs is a remote location, and a well-planned marketing strategy would be needed to generate the business required to make the complex economically successful.

The Hot Springs area is certainly in need of an economic boost, and it may be that the planned complex could provide one. However, the information submitted does not provide enough detail to judge its feasibility.

Another point needing clarification is what legally binding relationship Cam Redevelopment Corporation, Inc., has with the public entity sponsoring the project. Since private organizations are ineligible for RDGP grant funds, the role of the Town of Hot Springs--i.e., its authority to control the project, make management decisions, and financially benefit from project proceeds--needs to be better explained.

#### FINANCIAL ASSESSMENT:

It is extremely difficult to evaluate the financial aspects of this proposal based on the information provided. The application lists \$767,000 for total construction costs, \$300,000 of which would come from RDGP. Most of the balance of the construction funding (\$467,000) would presumably come from the Department of Commerce's Community Development Block Grant funds and BPA's Super Good Cents Program. The applicant does not state in the application what these other funds would be used for, nor has RDGP been notified that these funds have been received. Without an in-depth assessment of overall project costs, the reasonableness of the applicant's request for \$300,000 cannot be sufficiently determined.

#### ENVIRONMENTAL EVALUATION:

Not enough information is included to determine the long-term effect of the proposed development on the hot springs' hydrology. The construction phase of the project would have short-term localized impacts, such as noise, dust, traffic, and soil compaction.

#### PUBLIC BENEFITS ASSESSMENT:

If the applicant achieves its goal of making the hot springs a major destination resort, the economic benefit to the area and Montana would be considerable. Sanders County residents suffer from chronically high unemployment and below average annual income, both of which would be improved, directly and indirectly, as the result of the project.



## RECOMMENDATIONS:

No funding is recommended for this project as proposed. Funds may be more appropriately requested from the Department of Commerce's Business Assistance Programs.

- 37 -

APPLICANT NAME: Sweet Grass County Conservation District

PROJECT/ACTIVITY NAME: An Accelerated Soil Survey Program for Montana

AMOUNT REQUESTED: \$ 298,080

### OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 20,664
USDA/Soil Conservation Service	\$ 215,118

TOTAL PROJECT COST: \$ 533,862

### PROJECT DESCRIPTION:

The purpose of this grant request is to accelerate the present soil survey program in Montana. Soils information and mapping are lacking in portions of 20 counties. The Montana counties with areas still in need of soil survey information include: Beaverhead, Chouteau, Custer, Deer Lodge, Flathead, Gallatin, Garfield, Golden Valley, Granite, Hill, Jefferson, Lincoln, Meagher, Musselshell, Park, Phillips, Sanders, Silver Bow, Sweet Grass, and Wheatland. Agricultural operators, local governments, planners, developers, and state and federal agencies make use of soil survey information. Soils information is necessary for soil and water conservation planning, water quality planning, and preventing costly land management and development problems.

The primary objective of the conservation district's request is to assist the districts that are currently lacking soils information and mapping. If the grant money becomes available, the conservation district would meet with the Soil Conservation Service (SCS) and choose priority areas in 6 of the 20 counties that have areas lacking soil surveys. The grant money would be divided between the six cooperating districts and allow each district to hire one soil scientist for a period of two years. The soil scientist would receive training, field equipment, office space, travel expenses, and general administrative support from SCS. The conservation district would provide clerical services.

Accomplishment of this project would result in an additional 600,000 acres being mapped. At current staffing levels, soil surveys in Montana won't be completed until 1998, according to SCS. If SCS funding is reduced as anticipated, and state support is not given, completion could be delayed until sometime past the year 2000.

#### TECHNICAL ASSESSMENT:

Accurate soils mapping and accompanying interpretations are used by a host of land resource specialists and planners. There is a documented and well-supported need for this information.

Although accurate soil surveys are very useful, farm and ranch planning, waste site selection, construction impact mitigation, and mine reclamation planning are not precluded in areas lacking published soil surveys. Farmers and ranchers can obtain soils information from local SCS staff (soil scientists and conservationists) through individual requests. The siting of facilities such as waste disposal sites and mining operations often requires soils investigations with greater detail than SCS surveys and that are routinely performed by company staff or private consulting soil scientists. Severe and unacceptable damage caused by mining operations and major facility siting is not an inherent result of lack of SCS soils mapping.

#### FINANCIAL ASSESSMENT:

The proposal is that the state pay 93.5 percent of the salaries and benefits for six soil scientists over a two-year period. SCS would cover the remaining 6.5 percent. Salaries and benefits appear to be reasonable. Annual salary and benefits for the soil scientists are \$26,562 apiece.

The salaries and benefits portion of the budget is summarized below:

<u>Cost Category</u>	<u>RDGP Contribution</u>	<u>SCS Contribution</u>	<u>TOTAL</u>
Salaries and wages	\$ 242,340	\$ 16,800	\$ 259,140
Fringe benefits	55,740	3,864	59,604
TOTALS	\$ 298,080	\$ 20,664	\$ 318,744

The Conservation Districts Division of DNRC received a \$300,000 RIT grant in 1987 for the accelerated soil survey. To date \$65,000 remains to be disbursed. The 1987 contract requires that 300,000 acres be mapped; so far 247,043 acres have been mapped.

### ENVIRONMENTAL EVALUATION:

No positive or negative effects on the environment would directly result from this project.

### PUBLIC BENEFITS ASSESSMENT:

Thirty percent of the state of Montana (20 percent of private lands) lacks accurate soils information. This lack of soils information can result in poor land management decisions that can lead to future problems such as soil erosion, ground-water and surface water pollution, and poorly designed urban or commercial development. These problems may be costly to all Montanans due to the expenditure of public funds required to find solutions and reclaim the damaged natural resources. Soils information is used by private landowners, businesses, local governments, and state and federal agencies for a wide variety of purposes, including: (1) land purchase and development decisions, (2) water reservations process, (3) design of efficient cropping and irrigation systems, (4) design of efficient range and pasture management systems, (5) development of recreational opportunities, and (6) compliance with the Food Security Act (mandatory conservation farm plans and conservation reserve plans).

Funding for the 1987 RDGP grant to accelerate the soil survey was approved to assist with meeting the deadline for farm and ranch planning under the 1985 Food Security Act. An October 1989 SCS quarterly progress report stated that planning goals for the Food Security Act were met by September 30, 1989. All Montana farmers and ranchers requesting assistance received help developing a conservation plan and will remain eligible for U.S. Department of Agriculture programs. Since the deadline for farm planning under the Food Security Act has been met, an accelerated soil survey is no longer crucial. The soil survey will be completed with or without the assistance of RDGP funds.

### RECOMMENDATIONS:

No funding is recommended for this project.



APPLICANT NAME: Stillwater Conservation District  
PROJECT/ACTIVITY NAME: Field Evaluation of Plastic Lining and  
Fabrication Process

AMOUNT REQUESTED: \$ 89,400

OTHER FUNDING SOURCES AND AMOUNTS:

Applicant	\$ 24,295
Soil Conservation Service	Amount not specified
Montana State University	Amount not specified

TOTAL PROJECT COST: \$ 113,695

PROJECT DESCRIPTION:

The Stillwater Conservation District has long recognized the resource degradation caused by canal seepage within Stillwater County. Land adjacent to the Yellowstone River is often highly salinized, and irrigation water leaching through these soils returns to the Yellowstone River carrying dissolved salts. Canal seepage within sodic and saline soils has taken land out of production from the encroachment of saline areas into cropland.

Many canal systems within the state are in drastic need of improvement. Most have areas of excessive seepage and deteriorated concrete pipeline structures that are in need of replacement. This project would demonstrate an alternative that may reduce the costs of replacement of many components of Montana's irrigation canal infrastructure.

The Stillwater Conservation District is working cooperatively with the Cove Ditch Irrigation Company to become involved in the test lining process being developed by Innovative Process Corporation. Together they have identified a specific location on a canal system that has an extensive seepage problem resulting in salinized cropland that damaged and destroyed crops. This area is adjacent to the Yellowstone River.

Installation preparation would be coordinated by Innovative Process Corporation and the Soil Conservation Service (SCS). Design criteria for required canal preparation prior to installation would be specified by the Soil Conservation Service in cooperation with Cove Ditch Irrigation Company. The Stillwater Conservation District would schedule field demonstration tours during construction, if feasible, and conduct on-site tours after construction for several ditch companies in the Stillwater and Yellowstone County area. At this time an



Innovative Process Corporation technician would provide videos and technical information as to the other lining capabilities of the materials, such as lining and rehabilitation of deteriorating pipelines and culverts.

The Stillwater Conservation District would be responsible for documenting the economics of the lining project, including comparable cost data from existing lining materials. It would also document the amount of water saved by this project and prepare a report identifying the Soil Conservation Service's engineering recommendations for installation specifications. Throughout the irrigation season and when the liner is installed, observations as to the liner's performance and compatibility with livestock and wildlife would be documented and published in Montana agricultural news outlets such as *Montana Stockman*, *Mont-Wyo News*, and local conservation newsletters.

#### TECHNICAL ASSESSMENT:

The RDGP grant proposal does not present sufficient information to enable an assessment of technical feasibility. Considerably more detail is needed on whether previous laboratory or other work has been conducted, costs, project need and urgency, work schedule, qualifications and background of the private company, potential environmental impacts, and engineering design. The applicant has presented little information on other alternative technology, implying that this proposal represents the most cost-effective solution to a widely recognized problem. Without an in-depth assessment and evaluation of other technology, management options, etc., the current effort is difficult to assess.

#### FINANCIAL ASSESSMENT:

Costs of this project cannot be evaluated because of lack of detail. For example, \$70,000 for supplies and materials and \$12,000 for equipment are not substantiated by the information presented. Further, a considerable amount of time and expense is represented as being contributed by others (i.e., SCS and Montana State University), yet the description of the work to be performed by them is lacking detail.

#### ENVIRONMENTAL EVALUATION:

Any environmental impacts that might result from this project are difficult to determine without more information on the construction methods proposed. Impacts would need to be assessed more fully upon development of the project design and specifications.

PUBLIC BENEFITS ASSESSMENT:

If the project were to ultimately result in wide acceptance of low maintenance, cost-effective, new technology that would eliminate seepage losses over the long term, then public benefits would be considerable. In the present, benefits accrue to those interests evaluating new technology options.

RECOMMENDATIONS:

No funding is recommended for this project.

- 39 -

APPLICANT NAME: Glacier County  
PROJECT/ACTIVITY NAME: Glacier County Experimental Lateral Drilling Project

AMOUNT REQUESTED: \$ 232,240

OTHER FUNDING SOURCES AND AMOUNTS:

J & G Operating \$ 42,067

TOTAL PROJECT COST: \$ 274,307

PROJECT DESCRIPTION:

The applicant (Glacier County) proposes to fund a private drilling company's efforts to increase oil production from an existing stripper well. Envisioned benefits include jobs, increased mineral taxes, and improvement of the local economy.

The technology selected involves drilling horizontally from the primary wellbore into the pay zone to increase contact with the oil reservoir. The transition from the vertical to the horizontal phase would expose approximately 400 to 500 feet of new reservoir. The result of the project is expected to be an increase in the production of the current well.

TECHNICAL ASSESSMENT:

Oil and gas wells permitted under Title 82, Chapter 11, MCA, are ineligible for RDGP funding (90-2-1112, MCA). The applicant's statement that the "project is covered under an existing Drilling and Production Bond from the Board of Oil and Gas Conservation" precludes funding.

Irrespective of this constraint, reviewers felt that the proposed technology is commonplace in the Williston Basin and elsewhere and that RDGP funding of a project that would primarily benefit private interests (the operator and oil and gas lessor) is inappropriate. Solutions to stripper well economic problems are not likely to occur as a result of funding this project.

#### FINANCIAL ASSESSMENT:

The benefits of this project do not appear to exceed the cost. One individual well is unlikely to start an economic boom, as claimed in the application.

The RDGP cost breakdown is as follows:

Contracted services	\$ 227,040
Drill bit	4,200
Miscellaneous	<u>1,000</u>
 TOTAL	 \$ 232,240

Operator contributions amount to \$42,067 mostly in the form of equipment--e.g., wellbore and casing, tubing, pumps, rods, etc.

#### ENVIRONMENTAL EVALUATION:

Major adverse environmental impacts are not anticipated. Proper care in the construction of the drilling location and access road, disposal of drilling fluids and other wastes, and safety precautions would mitigate most impacts. Site-specific evaluation of the location and mitigation measures might need to be conducted by the Board of Oil and Gas Conservation.

#### PUBLIC BENEFITS ASSESSMENT:

Benefits, other than to the operator and mineral lessor, are probably minor. Application to other wells or fields is doubtful.

#### RECOMMENDATIONS:

No funding is recommended for this project.





## CHAPTER V

### STATUS REPORT OF

### ACTIVE PROJECTS APPROVED FOR FUNDING BY THE

### 1989 LEGISLATURE

This chapter summarizes the status of active projects that were funded by the 1989 Montana Legislature.

1. Lewis and Clark County Conservation District, Blackfoot River Abandoned Mines

This project is composed of three sites in the Lincoln area. Reclamation at these sites will include disposal of tailings from drainage ways; sealing all openings; disposing of all structures, debris, and trash; and liming, replacing topsoil, and revegetating all disturbed areas. This project is under contract, but work has not yet begun. The 1989 legislature appropriated \$300,000 for this project.

2. State Lands, Department of, Elkhorn Creek Water Quality Improvement Project

The proposed reclamation will remove the mill tailings pile from the Elkhorn Creek floodplain. The mine adit discharge will be piped around the tailings, and the site will be contoured and revegetated. This project is under contract, but construction has not yet begun. The 1989 legislature appropriated \$300,000 for this project.

3. State Lands, Department of, Wood Chute Creek Basin Water Quality Improvements

Reclamation of this site will include disposing of mine structures, closing mine openings, contouring the tailings, isolating the tailings from surface runoff, and revegetating the disturbed areas. This project has not yet been contracted. The 1989 legislature appropriated \$300,000 for this project.

4. Montana State University (MSU), Reclamation Research Unit,  
Fate of Cyanide in Soils and Heap-Leach Pads

MSU will evaluate the fate and transport of cyanide and cyanide-metal complexes in three typical soils and in heap-leach pads. Work has commenced on this project. The 1989 legislature appropriated \$140,243 for this project.

5. Montana Bureau of Mines and Geology (MBMG), Land Application  
of Cyanide Leach Solutions

The purpose of this laboratory investigation is to evaluate whether oxidizing residual cyanide is an adequate method of protecting the environment from potentially toxic metals. A research site has been established, and the lysimeters and neutron tubes have been installed. MBMG is currently preparing a test to determine the rate of movement through the system. The first cyanide application is expected in spring 1991. The 1989 legislature appropriated \$91,161 for this project.

6. Montana Salinity Control Association (MSCA), Salinity  
Control: A Nonpoint Source Pollution Management Program

MSCA will continue to work on reclamation of saline seep areas in Montana. Fieldwork and planning will begin on at least 50 new sites. DNRC is currently in the process of finalizing a contract for this project. The 1989 legislature appropriated \$200,000 for this project.

7. Health and Environmental Sciences, Department of (DHES),  
Solid and Hazardous Waste Bureau, Pesticide Contamination  
Cleanup in Montana

DHES will investigate and clean up pesticide-contaminated sites in, or adjacent to, three rural airports and two weed control districts. Sampling of three sites to determine the extent of contamination is under way. Preliminary results of the treatability study indicate white rot fungi may successfully degrade pesticide contaminants in soil. This method was field-tested at the Joliet site, the site having the worst contamination problems. The 1989 legislature appropriated \$150,000 for the project.

8. Butte-Silver Bow, Government of, Public Lands Reclamation Project

This project involves reclaiming publicly owned land contaminated by mine-waste fill materials. There are eight project sites: public school yards, ball fields, and parks. Butte-Silver Bow has completed the engineering work and will do the construction work itself. Most (75 percent) of the construction is expected to be completed by fall 1990. The 1989 legislature appropriated \$120,800 for the project.

9. Toole County, North Toole County Reclamation Project

The objectives of this ongoing project are to continue inventory and assessment of sites needing reclamation, characterize groundwater quality in the area, accomplish removal and burial of abandoned buildings and equipment, continue soil reclamation research, and apply results to other sites. The contract for this project is currently being negotiated. The 1989 legislature appropriated \$299,040 for the project.

10. Montana State Library, Montana Natural Heritage Program

The Natural Heritage Program is a comprehensive, computer-assisted inventory of Montana's biological resources, emphasizing rare, threatened, or endangered plant and animal species and biological communities. Records continue to be added to the Heritage Program. There are currently more than 5,000 records in the databases. The program has been instrumental in land management decision making. The 1989 legislature appropriated \$197,607 for this project.

11. State Lands, Department of, Middle Fork Warm Springs Creek Reclamation Project

Reclamation proposed includes disposing of mine structures, closing mine openings, contouring tailings, isolating tailings from surface runoff, and revegetating disturbed areas. This project is not yet contracted. The 1989 legislature appropriated \$150,000 for this project.



12. Montana Bureau of Mines and Geology, Use of Natural Zeolites in Reducing Heavy Metal Concentrations at Mining Operations and Impacted Lands

The purpose of this project is to investigate the use of naturally occurring zeolites in tailings impoundments, disposal sites, and reclamation practices at heavy metal contaminated sites. This project is not yet contracted. The 1989 legislature appropriated \$149,238 for this project.

13. Kalispell, City of, Lawrence Park Slope Stabilization and Reclamation

The city proposes to stabilize a hillside that is continually sloughing and threatening a local golf course. This project is slated for construction September 15, 1991. The 1989 legislature appropriated \$170,260 for this project.

14. Montana Board of Oil and Gas Conservation (BOGC), Broadview Well

Saline water flowing from a deteriorated well is causing problems in the area west of Broadview, Montana. The project plans are to re-enter the well, recover any tools left behind, and cement off the leaking formations. BOGC anticipates project completion by December 1990. The 1989 legislature appropriated \$65,600 for this project.

15. Natural Resources and Conservation, Department of, Conservation Districts Division, Nonpoint Source Pollution Control in Montana

A series of 16 small projects will demonstrate methods for controlling sedimentation from agriculture, forestry, mining, and channel modification. The public education component will disseminate information on nonpoint pollution and methods for control. This project contract is currently being drafted. The 1989 legislature appropriated \$262,573 for this project.



## CHAPTER VI

### STATUS REPORT OF

### ACTIVE PROJECTS APPROVED FOR FUNDING BY THE

### 1987 LEGISLATURE

This chapter summarizes the status of active projects that were funded by the 1987 Montana Legislature.

1. State Lands, Department of, Upper Blackfoot River Streambank Reclamation

The purpose of this project is to reclaim streambanks, floodplains, and disturbed areas damaged by hard-rock mining in the Blackfoot River drainage. Lewis and Clark County Conservation District has received a RDGP grant from the 1989 legislature for additional cleanup of mine wastes along the upper Blackfoot River that will be coordinated with this project. This project is under contract, but construction has not yet begun. The 1987 legislature appropriated \$107,000 for this project.

2. Fish, Wildlife and Parks, Department of (DFWP), High Ore Creek Reclamation Project

The purpose of this project is to improve the water quality of High Ore Creek and the Boulder River. Both drainages are adversely impacted by metal contaminants originating at this site. Reclamation will include removing tailings from the creek, enlarging and lining diversion ditches, and constructing sediment ponds. Construction is under way, and DFWP anticipates completion by December 1990. The 1987 legislature appropriated \$198,600 for this project.

3. State Lands, Department of (DSL), Snowshoe Creek Streambank Reclamation

The purpose of this project is to reclaim streambanks, floodplains, and disturbed areas damaged by hard-rock mining activities in the Snowshoe Creek watershed near Libby, Montana. Construction of this project has been completed. The 1987 legislature appropriated \$107,000 for this project.

4. Toole, County of, North Toole County Reclamation Project

This is an oil-field reclamation planning and construction project that will help alleviate contamination of soil and groundwater, remove abandoned equipment and debris, and provide general surface reclamation and site restoration. The 1985 and 1987 North Toole County Reclamation Projects have been combined. To date 20 sites have been reclaimed. The bids for these sites came in lower than expected, so there are some remaining funds. These funds will be used for construction in June 1991. The 1987 legislature appropriated \$150,000 for this project.

5. State Lands, Department of (DSL), Nellie Grant Mine Reclamation

DSL will reclaim streambanks, floodplains, and the areas disturbed by past hard-rock mining at the Nellie Grant mine south of Helena. This project has been contracted, but construction has not yet started. The 1987 legislature appropriated \$84,900 for this project.

6. Health and Environmental Sciences, Department of, Abandoned Oil Refineries

This project originally involved investigation, remedial action, and cleanup at five abandoned oil refineries. Responsible parties were found for four of the five refineries. Funds were restricted to the Arro Refinery near Lewistown, because no responsible party was found for this site. Sampling was conducted in the following Arro sites: tetraethyl lead area (including a building and adjacent soils), sludge pits, tar seeps, contaminated groundwater sites, and buried pipes. The contaminated soils were the most serious threat at the site. Cleanup of the lead-contaminated soils was completed in August 1990. This phase of the Arro Refinery cleanup project is completed. The 1987 legislature appropriated \$300,000 for this project.

7. Fish, Wildlife and Parks, Department of, Cataract Creek Reclamation Project

This hard-rock mine reclamation project entails reconstruction of an existing settling pond. DNRC has been advised of a pending enforcement action by the Department of State Lands. This project is therefore on hold until the matter is resolved. The 1987 legislature appropriated \$21,565 for this project.

8. Montana Salinity Control Association (MSCA), Montana Salinity Control Program

MSCA operates a program of technical field assistance designed to correct saline seep and reclaim land on a farm-by-farm basis. Recharge area identification, hydrogeologic investigation, and intensive cropping methods are used to develop reclamation plans. MSCA intended to develop approximately 50 plans during this contract period; from April 1988 to June 1990, 52 plans were developed. The 1987 legislature appropriated \$300,000 for this project.

9. Butte-Silver Bow, Government of, Anselmo Mine Yard Reclamation Project

This project involves cleanup and renovation of the mine yard, buildings, and structures. This will allow the yard to become the central attraction for the Butte/Anaconda Historical Parks System. During the summer of 1990, the Department of State Lands (DSL) removed all asbestos from the site. The city is waiting for DSL to cap an open mine shaft before letting contractors on the site because of safety concerns. Butte is in the process of developing architectural and engineering plans. The 1987 legislature appropriated \$150,000 for this project.

10. Lower Musselshell Conservation District, Groundwater from Abandoned Mine Workings for Irrigation and Instream Flows, Lower Musselshell River

This project involves two separate studies. The first determined the quality, quantity, and usability of water stored in abandoned underground coal mines, examined the potential of water storage to supplement Musselshell River flows, and evaluated the cost-effectiveness of development of this water. Test pumping showed that it is not economically feasible or technically viable to pump water from the mines for irrigation purposes. A report and the conservation district's recommendations are expected by fall 1991. Follow-up will be carried out to determine water quality characteristics and subsidence for future reference.

The second phase consists of studies in the Musselshell River basin on water availability, water conveyance efficiency, amounts of water coming from off-stream storage, and amounts of instream water. Recommendations for Musselshell River basin water management were gathered from local water users. As a result of these recommendations, all contract water users will be required to have measuring devices at diversions and schedule ahead to order contracted water. The 1987 legislature appropriated \$272,320 for this project.



11. Governor's Office and Oil and Gas Conservation, Board of (BOGC), Programmatic Environmental Impact Statement

This project is designed to meet the requirements of SB 184. This bill provided an exemption from provisions of the Montana Environmental Policy Act (MEPA) for oil and gas drilling permits issued by BOGC until the adoption of a programmatic environmental impact statement (EIS). This project involves the preparation of a final programmatic EIS and a corresponding detailed work and public involvement plan. The programmatic EIS was completed and adopted by the Montana Board of Oil and Gas Conservation in December 1989. The remaining work will involve MEPA implementation, such as publishing a handbook titled *User's Guide to Drilling Oil Wells in Montana* and possibly purchasing more reference material. The 1987 legislature appropriated \$183,800 for this project.

12. Natural Resources and Conservation, Department of, Sodium and Salinity Sources in the Powder River Basin--A Chemical-Budget, Modeling Approach

The objectives of this project are to: (1) expand the Powder River water quality database by compiling existing data and collecting new data, (2) analyze variability and trends in water quality, (3) develop a water quality model capable of simulating monthly streamflow and dissolved solids loading, and (4) evaluate the effects of various management scenarios on surface water quality of the Powder River. Expansion of the water quality database has been accomplished, statistical analysis of the water quality data is 95 percent finished, water quality model development is 90 percent done, and Powder River management scenarios are 75 percent finished. All project objectives and the first draft of the project report are nearing completion. The 1987 legislature appropriated \$89,257 for this project.

13. State Lands, Department of, Drill Hole Reclamation in Montana; Hole-Plugging Trials Utilizing Bentonite

The purpose of this project is to field-test different bentonitic drill hole abandonment materials and a variety of abandonment technologies applicable to Montana exploration activities. Objectives include laboratory testing to determine optimum bentonite characteristics; field-testing waste bentonite in shot holes; developing methods of bentonite placement; monitoring effects of shot hole drilling, plugging, and blasting; evaluating economic benefits of using these materials; and



determining their efficiency in preventing mixing of waters from different aquifers. This project has been combined with the Montana Bureau of Mines and Geology's bentonite project (number 19).

Drilling at the clinker site was completed in April 1990, and all holes were plugged at this site. PVC casing was installed in 25 of these holes during the plugging procedures. Infiltration monitoring has begun for these sites. Plugging at both the sandstone and shale sites has begun, and completion is expected prior to the 1990 winter freeze-up. Infiltration tests will start after plugging. Preparation for deep hole and seismic trials has begun. Upcoming work will include refining program details, preparing bid specifications, and ordering materials for the 1991 field season. The 1987 legislature appropriated \$100,000 for this project.

14. Natural Resources and Conservation, Department of,  
Conservation Districts Division, Montana's Accelerated Soil  
Survey Program

RDGP funding is being provided for additional soil scientists and equipment to hasten completion of the soil survey in Montana. The contract requires that 300,000 acres be mapped; the July 1990 progress report showed that 319,261 acres have been mapped. This project is near completion. The 1987 legislature appropriated \$300,000 for this project.

15. Governor's Office, Headwaters RC&D Area, and Deer Lodge  
Valley Conservation District, Clark Fork Reclamation  
Demonstration for Floodplain Systems Impacted by Mining

This project will demonstrate several reclamation techniques on land near the upper Clark Fork that has been contaminated with copper, cadmium, and arsenic wastes from mining and smelting. Field construction was completed in August 1990. Seeding and planting will be completed in fall 1990 or spring 1991. A tour of the project is planned for summer 1991. Monitoring will continue through fall 1991. The 1987 legislature appropriated \$130,000 for this project.

16. Montana Bureau of Mines and Geology (MBMG), Groundwater  
Information Center--Deep Aquifer Databases

MBMG will develop an electronic database of the geology and water quality of deep aquifers. Data entered so far include 212 water quality analyses of deep aquifers in the eastern two-thirds of Montana; 428 water quality analyses of the Judith River, Eagle, and Kootenai formations; and 54 analyses of

aquifers in south-central Montana. This task is virtually completed. Software has been developed to handle entry of data on depth below land surface of important aquifers in eastern Montana. Data entry is under way on this task, and 15 of the 2,100 records have been entered. Other work remaining is the production of aquifer maps developed from the databases. The 1987 legislature appropriated \$155,950 for this project.

17. University of Montana, Botany Department, Improving the Biotic Resources of the Upper Clark Fork River

The university is conducting a study to explain the reduction in trout populations in the upper Clark Fork. A report on the macroinvertebrate habitat assessment portion of the study was received in August 1990. The remaining aquatic macroinvertebrate studies are completed; results are being analyzed and put into report form. Artificial stream studies will continue, along with the evaluation of phosphorus, nitrogen, and calcium in limiting standing algae crops and algae growth. The 1987 legislature appropriated \$26,638 for this project.

18. Butte-Silver Bow, Government of, Urban Enhancement/  
Mitigation of Past Mining and Smelting Damage Through Urban Forestry

This project established an urban tree-planting program in Butte. In the summer of 1989, 64 trees were planted, and 100 trees were planted in the summer of 1990. A current waiting list numbers 20 people, and another 100 trees will be planted in 1991. Butte is currently working on a three-year contract with a nursery to supply trees. It will continue to work toward making the tree-planting project self-sustaining. The 1987 legislature appropriated \$100,000 for this project.

19. Montana Bureau of Mines and Geology (MBMG), Low Grade Bentonite for Shot Hole Plugging

MBMG will document the usability of low grade (waste) Montana bentonite for seismic shot hole plugging, possibly resulting in more economical procedures to protect groundwater. Objectives include laboratory testing to determine optimum bentonite characteristics; field-testing waste bentonite in shot holes; developing methods of bentonite placement; monitoring effects of shot hole drilling, plugging, and blasting; evaluating economic benefits of using these materials; and determining their efficiency in preventing mixing of waters from different aquifers. This project has been combined with the Department of State Lands' bentonite project (number 13).

Drilling at the clinker site was completed in April 1990, and all holes were plugged at this site. PVC casing was installed in 25 of these holes during the plugging procedures. Infiltration monitoring has begun for these sites. Plugging at both the sandstone and shale sites has begun, and completion is expected prior to the 1990 winter freeze-up. Infiltration tests will start after plugging. Preparation for deep hole and seismic trials has begun. Upcoming work will include refining program details, preparing bid specifications, and ordering materials for the 1991 field season. The 1987 legislature appropriated \$45,890 for this project.





## CHAPTER VII

### STATUS REPORT OF ACTIVE PROJECTS APPROVED FOR FUNDING BY THE 1985 LEGISLATURE

This chapter summarizes the status of active projects that were funded by the 1985 Montana Legislature.

1. Montana Bureau of Mines and Geology (MBMG), Groundwater Information Center

The purpose of this project is to develop a computerized data management program to organize and disseminate Montana's groundwater data. All but one of the project objectives have been completed. MBMG must still set up outside user access capability so the database will be available for direct use by private and public users. This is expected to be accomplished before January 1991. The 1985 legislature appropriated \$75,000 for this project.

2. Anaconda-Deer Lodge County, Deer Lodge Valley Conservation District, and Headwaters Resource Conservation and Development Area, Anaconda Soil Stabilization and Erosion Control

This project entails planting trees, shrubs, and grasses on the steep hills south of Anaconda that have eroded as a result of years of timber harvesting and smelting operations. More than 100,000 trees and shrubs have been planted, with an average overall survival rate of 62 percent over the past three years. A settling basin to control runoff into Anaconda from these hills was built in June 1988. All funds for this project have been spent, but DNRC is withholding 10 percent until the final report is received, as required by the contract agreement. The county is currently in the process of drafting the final report. The 1985 legislature appropriated \$150,000 for this project.

3. Montana State University, Water Resources Research Center, Stream Restoration of Confederate Gulch and Deep Creek

This is a study project to develop, evaluate, and demonstrate restoration of trout habitat in streams that have been structurally damaged by placer mining and activities having similar effects. Several treatment measures were installed,

including riprap, cable tree revetment, and log sill structures. The first four phases--preplanning investigation, preproject design, final project design, and project construction--are completed. The evaluation phase is not completed; remaining work includes fish population inventory, spawning survey, data collection and analysis, and final report preparation. The 1985 legislature appropriated \$134,249 for Confederate Gulch and Deep Creek.

4. Toole, County of, North Toole County Reclamation Project

This is an oil-field reclamation planning and construction project that will help alleviate contamination of soil and groundwater, remove abandoned equipment and debris, and provide general surface reclamation and site restoration. The 1985 and 1987 North Toole County Reclamation Projects have been combined. To date 20 sites have been reclaimed. The bids for these sites came in lower than expected, so there are some remaining funds. These funds will be used for construction in June 1991. The 1985 legislature appropriated \$298,130 for this project.

5. Natural Resources and Conservation, Department of,  
Conservation Districts Division, Reclamation of Streambanks  
and Adjacent Areas Damaged by Placer Mining

The purpose of this project is to provide funding to conservation districts to undertake reclamation projects on streambanks and adjacent sites damaged primarily by placer mining activities. Negotiations are continuing with landowners in Madison and Meagher Counties. Project start-up on three projects is expected in spring of 1991. The 1985 legislature appropriated \$30,000 for this project.

6. Red Lodge, City of, Coal Miner's Memorial Park Revegetation  
and Irrigation Project

The purpose of this project is to provide soil stabilization and landscaping for Coal Miner's Park, a recently reclaimed coal dump and landfill. Completion of the contract for revegetation and irrigation has been delayed because ownership of the easterly portion of Coal Miner's Park could not be obtained until April 1990. The contractor is scheduled to complete the project in fall of 1990, but, due to tree order delays, planting cannot be completed until spring of 1991. The 1985 legislature appropriated \$100,000 for this project.

7. Powder River Conservation District, Irrigation Water Quality Study

The purpose of this project was to determine the potential long-term effects of irrigation on soils adjacent to the Powder River. This project has been completed, and the final report has been submitted and approved. All tasks were completed satisfactorily, and the contractor also did extra work not required in the contract. A grant closeout agreement has been sent to the conservation district. The 1985 legislature appropriated \$80,000 for this project.

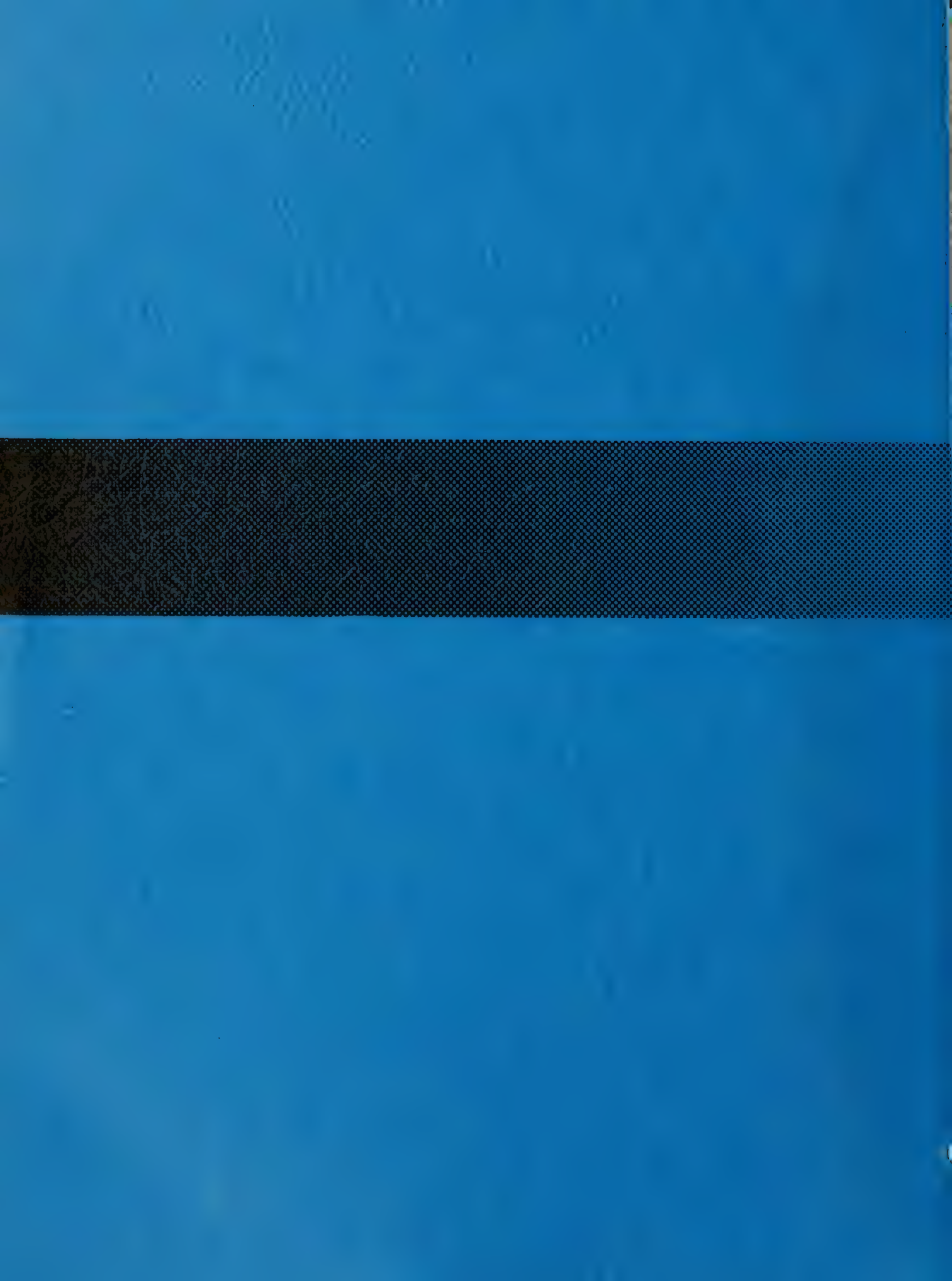
8. Anaconda-Deer Lodge County, Sewage Facilities

The grant money will be used to fund a portion of the work needed on the discharge structure of the municipal sewage treatment facility. The 1985 legislature appropriated \$70,000 for this project.









# Renewable Resource and Water Development Programs

DEPARTMENT OF NATURAL RESOURCES  
AND CONSERVATION  
PROJECT EVALUATIONS  
AND RECOMMENDATIONS  
FOR 1992-1993 BIENNIUM  
AND STATUS REPORT  
FOR 1990-1991 BIENNIUM

Presented to the Fifty-Second  
Montana Legislature

January 1991







RENEWABLE RESOURCE AND WATER  
DEVELOPMENT PROGRAMS

Project Evaluations and Recommendations for  
1992-1993 Biennium

and

1990-1991 Biennium Status Report

DEPARTMENT OF NATURAL RESOURCES  
AND CONSERVATION  
JANUARY 1991



## TABLE OF CONTENTS

	Page
ALPHABETICAL INDEX OF ALL PROJECT SUMMARIES . . . . .	vi
INTRODUCTION. . . . .	viii

### CHAPTER I

THE WATER DEVELOPMENT PROGRAM - GRANTS AND LOANS UNDER \$200,000 . . .	1
A. Program Description and History . . . . .	1
B. Program Funding . . . . .	1
C. Application Administration and Project Review Procedures. . . .	2
D. Grant Project Ranking and Funding Recommendation Procedures. . . . .	2
E. Grant Administration and Monitoring . . . . .	4
F. 1990 Grant and Loan Applications for Funding in FY 92-93. . . .	4
Project Summaries . . . . .	8

### CHAPTER II

THE WATER DEVELOPMENT PROGRAM - LOANS GREATER THAN \$200,000 . . . . .	47
A. Program Description and History . . . . .	47
B. Interest Rates and Bond Repayment . . . . .	47
C. 1990 Loan Applications. . . . .	48
Project Summaries . . . . .	51

### CHAPTER III

THE RENEWABLE RESOURCE DEVELOPMENT PROGRAM. . . . .	63
A. Program Description and History . . . . .	63
B. Program Funding . . . . .	63
C. Application Administration and Project Review Procedures. . . .	63
D. Project Ranking and Funding Recommendation Procedures . . . . .	64

E.	Grant Administration and Monitoring . . . . .	64
F.	1990 Grant Applications for Renewable Resource Development Funding in FY 92-93 . . . . .	64
	Project Summaries . . . . .	69

#### CHAPTER IV

	WATER DEVELOPMENT PRIVATE LOAN PROGRAM. . . . .	151
--	---	-----

#### CHAPTER V

	WATER DEVELOPMENT EMERGENCY GRANT FUNDS . . . . .	153
--	---	-----

#### CHAPTER VI

	DEVELOPMENT AND IMPLEMENTATION OF WATER RESERVATIONS. . . . .	155
--	---	-----

#### CHAPTER VII

	POTENTIAL FEDERALLY AUTHORIZED WATER PROJECTS . . . . .	161
--	---	-----

#### CHAPTER VIII

	STATE-OWNED WATER PROJECT REHABILITATION. . . . .	165
--	---	-----

#### CHAPTER IX

	SUMMARY OF PROJECTS PREVIOUSLY FUNDED BY THE WATER DEVELOPMENT AND RENEWABLE RESOURCE DEVELOPMENT PROGRAMS . . . . .	173
A.	Water Development Projects Considered for Grant Funding by the 1983, 1985, 1987, and 1989 Montana Legislatures. . . . .	173
B.	Projects Approved for Loans by the 1983, 1985, 1987, and 1989 Montana Legislatures . . . . .	174
C.	Renewable Resource Development Program - Projects Considered for Grant Funding by the 1983, 1985, 1987, and 1989 Montana Legislatures . . . . .	176



## LIST OF TABLES

Table 1 - Water Development Program, 1991 Project Recommendations . . . . .	7
Table 2 - Water Development Program, Coal Severance Tax Loans . . . .	50
Table 3 - Renewable Resource Development Program, 1991 Project Recommendations . . . . .	68

## LIST OF FIGURES

Figure 1.1 - Water Development Program by Applicant Type. . . . .	5
Figure 1.2 - Water Development Program by Project Type. . . . .	5
Figure 1.3 - Water Development Program, Requested Funding by Project Type . . . . .	6
Figure 2.1 - Coal Severance Tax Loan Program by Applicant Type. . . .	49
Figure 2.2 - Coal Severance Tax Loan Program by Project Type. . . . .	49
Figure 3.1 - Renewable Resource Development Program by Applicant Type . . . . .	66
Figure 3.2 - Renewable Resource Development Program by Project Type . . . . .	66
Figure 3.3 - Renewable Resource Development Program, Requested Funding by Project Type . . . . .	67

## MAPS

### GEOGRAPHICAL DISTRIBUTION OF GRANTS (Back of Book)

A. Water Development Program - Grant Applications. . . . .	179
B. Renewable Resource Development Program - Grant Applications. . . . .	180

# WATER DEVELOPMENT AND RENEWABLE RESOURCE DEVELOPMENT PROGRAMS

## ALPHABETICAL INDEX OF PROJECT SUMMARIES

### APPLICATIONS FOR FUNDING IN FY 92-93

Applicant Name	Project Name	Page
BEAVERHEAD CO/RED ROCK RV WTR/SEWER DST.....	LIMA DAM REHABILITATION.....	57
BELT, TOWN OF.....	BELT SEWAGE SYSTEM IMPROVEMENTS.....	117
BIG SKY SEWER DISTRICT.....	COUNTY WATER & SEWER DISTRICT FOR BIG SKY.....	128
BROADWATER CONSERVATION DISTRICT.....	IRRIGATION WATER MGMT; CONSTRUCTION PROJECT.....	91
BUTTE-SILVER BOW GOVERNMENT.....	BLACKTAIL CREEK RESTORATION PROJECT.....	89
CARBON COUNTY, ET AL.....	INTEGRATED WASTE MANAGEMENT, SO CENTRAL MT.....	113
CASCADE & TETON COUNTY CONS DIST.....	MUDDY CREEK.....	133
CHINOOK IRRIGATION DISTRICT.....	MILK RIVER WATER SUPPLY PROJECT.....	8
CHINOOK, TOWN OF.....	MILK RIVER WEIR REPLACEMENT.....	120
COLUMBIA FALLS, CITY OF.....	WATER IMPROVEMENTS.....	51
COLUMBUS, TOWN OF.....	COLUMBUS RECREATION PROJECT.....	122
DARBY SCHOOL DISTRICT NO. 9.....	SCHOOL PARK.....	101
DAWSON CD DEV COUNCIL.....	AQUAFARM WATER PROJECT FEASIBILITY STUDY.....	147
DNRC/WATER MGMT/HYDROSCIENCES.....	BEAVERHEAD COUNTY GROUNDWATER STUDY.....	97
DNRC/WATER RESOURCES DIVISION.....	GIS PILOT PROJECT.....	124
DUTTON, TOWN OF.....	DUTTON WATER RESERVOIR.....	28
EKALAKA, TOWN OF.....	WATER SUPPLY & STORAGE PROJECT.....	79
FAIRFIELD, TOWN OF.....	FAIRFIELD WATERWAY.....	135
FALLON COUNTY.....	BAKER LAKE EROSION CONTROL & REC PATH.....	93
FLATHEAD JOINT BOARD OF CONTROL.....	FLATHEAD IRRIGATION INFORMATION SYSTEM.....	19
FLAXVILLE, TOWN OF.....	FLAXVILLE LOAN PAYMENT.....	143
FORSYTH, CITY OF.....	WATER TREATMENT PLANT IMPROVEMENTS.....	52
FORT SHAW IRRIGATION DISTRICT.....	REHABILITATION AND BETTERMENT STUDY.....	100
FORT SHAW IRRIGATION DISTRICT.....	REHABILITATION OF HEADWORKS & "A" SYSTEM.....	26
GLASGOW IRRIGATION DISTRICT.....	IMPROVING WATER USE.....	12
GLASGOW, TOWN OF.....	GLASGOW WATER & WASTEWATER.....	126
GRANITE CONSERVATION DISTRICT.....	DEMONSTRATION ICE BLOCK.....	36
GREENFIELDS IRRIGATION DIST.....	GREENFIELDS GRAVITY IRRIGATION.....	14
HUNTLEY IRRIGATION DISTRICT.....	REHAB/RECONST OF DIVERSION STRUC/MAIN CANAL.....	54
JEFFERSON VALLEY CONSERVATION DISTRICT.....	CEREAL-LEGUME CROPPING ROTATIONS.....	69
LAKESIDE COUNTY SEWER DIST.....	LAKESIDE WASTEWATER COLL & TRTMT FACILITY.....	139
LEWIS & CLARK COUNTY CONSERVATION DIST.....	NILAN WATER CONSERVATION PROJECT.....	22
LIBERTY COUNTY CONSERVATION DISTRICT.....	SWEETGRASS HILLS E BUTTE GROUNDWATER STUDY.....	103
PRIVATE APPLICANT.....	IMPROVEMENT PROJECT.....	31
PRIVATE APPLICANT.....	CROW CREEK DITCH LINING.....	44
LOWER MUSSELSHELL CONSERVATION DIST.....	RIVER MGMT TOOLS FOR MUSSELSHELL RIVER.....	10
PRIVATE APPLICANT.....	CHERRY CREEK FLOOD CONTROL & WATER CONS.....	39
MEAGHER COUNTY CONSERVATION DISTRICT.....	SOUTH SIDE CANAL LINING PROJECT.....	115
MILES CITY, TOWN OF.....	MILES CITY RECYCLING PROGRAM.....	109
MISSOULA COUNTY CONSERVATION DISTRICT.....	IRRIGATION DIVERSION ALTERNATIVES.....	105
MISSOULA CITY/COUNTY HEALTH DEPT.....	AQUIFER MONITORING/REMEDICATION.....	111
MISSOULA CITY/COUNTY HEALTH DEPT.....	LINDA VISTA SEWER INTERCEPTOR.....	130
MSU/MT WATERCOURSE.....	MONTANA WATERCOURSE.....	77
MSU/LOCAL GOVERNMENT CENTER.....	SOLID WASTE INFORMATION & ASSISTANCE CENTER.....	95
MSU/EXTENSION SERVICE.....	NATURAL RESOURCE MGMT EDUCATION.....	137
MSU/EAST AGRICULTURAL RESEARCH CENTER.....	MOVEMENT OF NITRATES.....	148
MSU.....	TESTING/EVALUATION OF LININGS.....	145
MT ST LIBRARY/NRIS.....	MONTANA WATER INFORMATION SYSTEM.....	73
MT ST LIBRARY/NRIS.....	NATURAL HERITAGE PROGRAM.....	81
MT ST LIBRARY.....	DROUGHT MONITORING SYSTEM.....	16
MT MINES & GEOLOGY, BUREAU OF.....	HYDROLOGIC CONTROLS ON SE MOBILITY.....	35
MT MINES & GEOLOGY, BUREAU OF.....	WATER EDUCATION PROGRAM.....	141
NEIHART, TOWN OF.....	NEIHART WATER SYSTEM.....	74
OUTLOOK COUNTY WATER & SEWER DIST.....	OUTLOOK WATER WELL CONNECTION.....	107
PHILLIPS CONSERVATION DISTRICT.....	MOISTURE MONITORING PROJECT.....	33
POLSON, TOWN OF.....	WELLHEAD PROTECTION PROJECT.....	82
PRIVATE APPLICANT.....	RIVER ROAD STABILIZATION.....	41
PRIVATE APPLICANT.....	RUBY WATER DAM-FEASIBILITY STUDY.....	24
SEELEY LAKE/MISSOULA CO WATER DIST.....	WATER TREATMENT PLANT.....	60
STILLWATER CONSERVATION DISTRICT.....	EVAL OF PLASTIC LINING/FABRICATION PROCESS.....	85

PRIVATE APPLICANT.....	STOCKETT WASTEWATER COLLECTION TRYMT SYSTEM.....	29
PRIVATE APPLICANT.....	SUN RIVER WATER SYSTEM.. ..	43
TETON COUNTY CONSERVATION DISTRICT.....	ALTERNATIVE DIVERSION SITES.....	119
THREE FORKS, TOWN OF.....	THREE FORKS WATER SYSTEM IMPROVEMENTS.....	87
YELLOWSTONE COUNTY CONSERVATION DIST.....	STREAMBANK REINFORCEMENT & EROSION CTR.....	71

## INTRODUCTION

The public policy of the State of Montana is to promote the conservation, development, and beneficial use of the state's water resources to secure maximum economic and social prosperity for its citizens. The Department of Natural Resources and Conservation (DNRC) provides the necessary coordination to meet these goals, as described in Title 85, MCA.

This report provides information about many of DNRC's programs and activities respective to Title 85. It also describes related planning, research, and development activities coordinated by DNRC as provided by section 90-2-1, MCA. In particular, this report describes resource development grant and loan activities and outlines DNRC's 1992-1993 biennium funding recommendations to the legislature for grants and loans authorized by the Title 85 Water Development Program and Title 90 Renewable Resource Development Program.

The Water Development and Renewable Resource Development programs are in many ways very similar. Therefore, DNRC coordinates the administration of these programs to avoid confusion and duplication. The Renewable Resource Development Program offers funding for projects involving a wide range of renewable resources; only public entities are eligible. The Water Development Program offers funding for water-related projects to both public and private entities. DNRC ranks all projects under both programs. Projects are recommended for funding under the program where the application will be most competitive.

Under these programs, public and private applicants requesting less than \$200,000 may receive grant and/or loan assistance. Private applicants are limited to a maximum grant of \$36,000, and public applicants with repayment capability are generally limited to grants of \$50,000 unless a hardship exists. Public applicants for projects with no revenue generating potential may receive up to \$100,000 in grant funds. The difference between the amount requested and the amount provided in a grant may be offered in an unsubsidized loan if the applicant can demonstrate the ability to repay.

Public loans financed by bonds secured with coal severance tax funds are also available for projects in amounts greater than \$200,000 under the Water Development Program. These may be offered at a rate less than the bond interest rate depending on the median family income represented by the applicant.

In addition to describing DNRC's Renewable Resource Development and Water Development program activities and recommendations, this report also describes DNRC's Title 85 activities in the development and implementation of water reservations, efforts to secure federal funding for Montana water projects, and progress in the rehabilitation of state-owned water projects.



## CHAPTER I

### THE WATER DEVELOPMENT PROGRAM - GRANTS AND LOANS UNDER \$200,000

#### A. Program Description and History

The Water Development Program was established in 1981 by the Montana Legislature to promote and advance the beneficial use of water, and to allow the citizens of Montana to achieve full use of the state's water by providing grant and loan financing for water development projects and activities. Public entities, private individuals, partnerships, and corporations are eligible to apply for funding.

Projects and activities must be water related and may include feasibility work, demonstration projects, or construction projects. In the past, eligible proposals have included rehabilitation of irrigation projects; dam or reservoir construction; control programs for saline seep; groundwater investigations; development of water-based recreation facilities; streambank stabilization and other erosion control programs; development of water supply, water treatment, or rural water systems; and development of gravity sprinkler irrigation systems.

The Water Development Program is in many ways similar to the Renewable Resource Development Program discussed in Chapter III. To avoid duplication and confusion, these programs are administered together. Thus, reference will also be made to the Renewable Resource Development Program in this chapter, as applicable.

#### B. Program Funding

Under the Water Development Program, a special revenue account was created and original allocations were set in 1981. Currently, funds deposited in the account are received from four sources, including all revenues of water resource projects and other related money as provided in section 85-1-603, MCA; 30 percent of the interest income of the resource indemnity trust fund; the excess of 0.475 percent of the gross coal severance tax proceeds allocated to the water development debt service funds above debt service requirements; and any fees or charges collected by DNRC for the servicing of loans.

Funding for Water Development Program grants and public loans, according to the enabling legislation, is to be derived from two sources: the excess in coal severance tax and the fees charged or collected for servicing loans. In the past, the legislature has also appropriated funds from the resource indemnity trust interest income portion of the Water Development Program special revenue account to fund additional Water Development Program grants and loans.

The legislature approves grants and public loans based on revenue projections for the upcoming biennium. Funds are disbursed to approved grants based on the project's priority ranking. Loans are funded through the sale of bonds secured with coal severance tax funds.

Water development project loans of \$200,000 or less can be made for privately owned projects with repayment capacity from the sale of Montana Water Development General Obligation Bonds; more detailed funding information is provided in Chapter IV.

### **C. Application Administration and Project Review Procedures**

The Resource Development Bureau of the Conservation and Resource Development Division in DNRC administers the Water Development Program. DNRC develops the application form and solicits proposals from local governments, irrigation and conservation districts, state government, the university system, and private entities. Each grant and loan proposal is assessed on technical, economic, financial, and environmental grounds. DNRC evaluates the proposals and solicits technical and financial review assistance from outside the agency when appropriate.

All grant applications and those loan applications from public entities are submitted to DNRC in the even-numbered years prior to each legislative session. Following review, feasible grant and public loan projects are ranked and recommended funding levels are set by DNRC using established program and financial need criteria. Funding for these projects must be approved by the legislature.

Private loan applications may be made to the Water Development Private Loan program at any time throughout the biennium; private loans made to individuals, partnerships, and corporations are approved by the DNRC director. The Water Development Private Loan program is described in more detail in Chapter IV of this report.

### **D. Grant Project Ranking and Funding Recommendation Procedures**

DNRC ranks all grant applications according to their priority and recommends funding levels. These recommendations are presented to the governor and in turn to the legislature. DNRC recommendations are guided by the policies of state law in regard to the use of water development funds. Applications are ranked to reflect the extent to which the project:

1. Optimizes public benefits and enhances public resources;
2. Fully utilizes water, and promotes conservation and efficient use of the resource;
3. Is needed and has urgency;
4. Is part of a family farm operation;
5. Uses reserved water; and
6. Is a water storage project.

Several other criteria have been adopted for the ranking system, primarily to make the Water Development Program compatible with the Renewable Resource Development Program. To be highly ranked under these criteria, the project must:

1. Have potential for statewide application;
2. Not have received funds previously; and
3. Not take prime agricultural land out of production.

Funding priority is assigned to each project after all projects are ranked. The maximum combined grant and loan request considered is \$200,000. Projects requesting more than \$200,000 are referred to the Coal Severance Tax Loan Program described in Chapter II of this report.

Once the priority of projects is established, a recommended grant amount is developed for each project. Funding levels are set as follows:

1. Generally, construction projects with repayment capacity, such as a community water or sewer project, may receive 25 percent of the total project cost and up to \$50,000 as a grant. However, even if a project has repayment capacity, consideration is also given to the demonstration value of the project and to the financial capability of the project sponsor. Projects with payback capability and demonstration value may receive 50 percent of the total project cost and up to \$100,000 as a grant. An entity which has taken on a heavy debt burden to solve its problems may receive 100 percent of the total project cost and up to \$100,000 in grant funding.

2. Projects with no repayment capacity may be recommended for 100 percent funding, up to \$100,000 in grant funding.

3. Private entities may receive no more than 5 percent of the potential funding or 25 percent of the total project cost, whichever is less. Thus, this year, private grants may be recommended for up to 25 percent funding but not more than \$36,000.

4. No project is recommended to receive more than a \$100,000 in grant funding since there is a great demand for, and a shortage of, these grant funds.

Once each project's grant funding level is established, consideration is given to the financial viability of the project. If the recommended grant is less than the applicant's total request, the balance is recommended for loan funding if the project has repayment capacity. If a project falls low on DNRC's ranking priority list and is unlikely to receive a grant, but has repayment capacity, the project sponsor can take the recommended grant amount as a loan instead.

A project summary, funding priority, and funding amount recommendation are then prepared for consideration by an outside review committee to obtain public input. DNRC makes a final recommendation to the governor, who in turn makes a recommendation to the legislature. Legislative approval is required for all grants and for those loans made to public entities.



## **E. Grant Administration and Monitoring**

After grant and loan funding is obtained from a legislative appropriations bill or from a bond sale, DNRC staff works with grant and public or private loan recipients to develop a project work plan. The work plan is included in the grant or loan agreement between the applicant and DNRC. Each agreement also includes a completion schedule and budget. Projects are initiated and funds are disbursed as trust funds and coal tax revenues become available and in accordance with the project schedule.

During the course of a project, project sponsors are required to submit periodic progress and final project reports. Reports and field visits are used to monitor project progress and completion. Loan sponsors are required to submit annual financial reports on the funded system during the life of the loan.

## **F. 1990 Grant and Loan Applications for Funding in FY 92-93**

In 1990, a total of 62 applications was received under the Water Development and Renewable Resource Development Programs; of these, 53 were public and private grant and loan applications for water-related projects and activities. Two applications for public water-related projects were withdrawn. Applications for water projects from both public and private entities are eligible under the Water Development Program, while only public entities are eligible to apply under the Renewable Resource Development Program. Each project is ranked under both programs. Then, based on ranking scores; projects are placed under the program that would provide the best chance for funding. Grant requests far exceed revenues available for grants. Requests for grants under both programs this year totaled more than \$3.5 million.

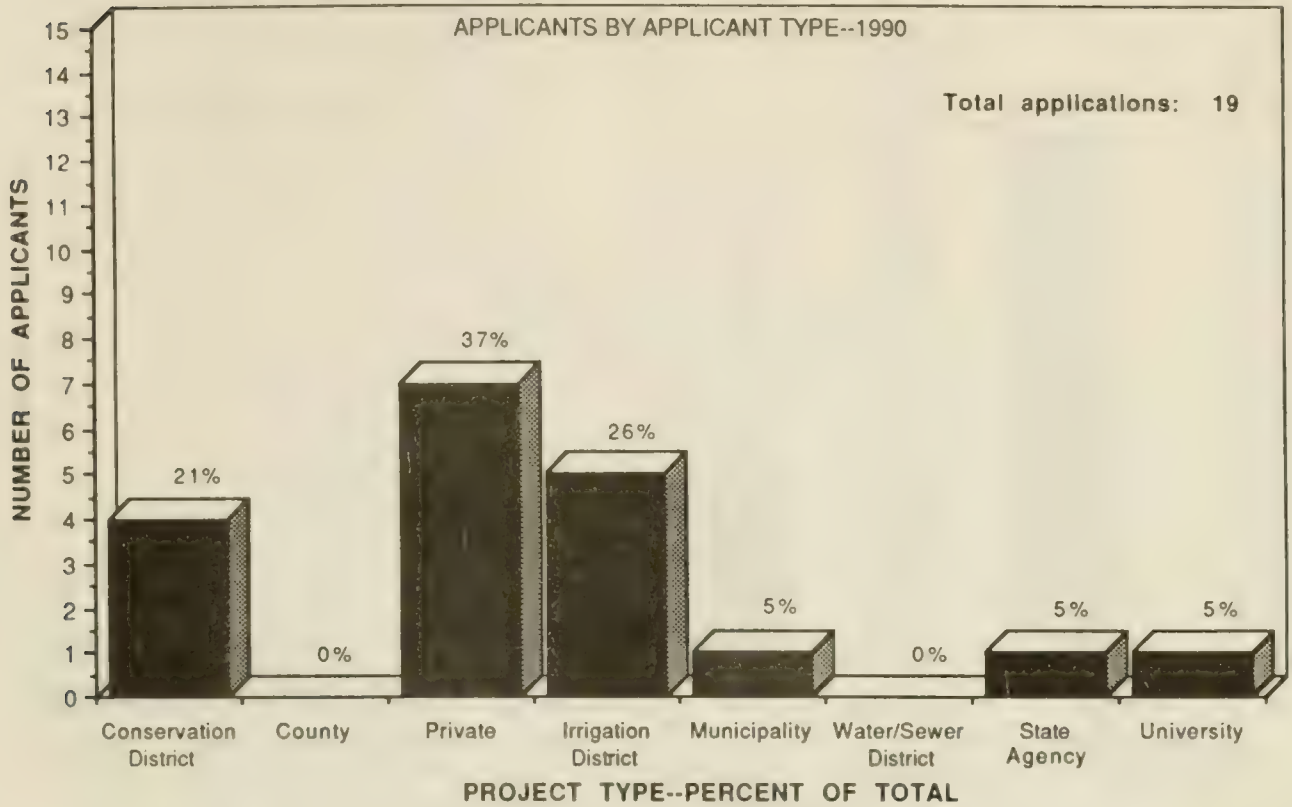
During this year's ranking process, the first 10 top-ranked, water-related grant requests were assigned to the Water Development Program. The next highest ranking group of applicants, including non-water related projects and only those water-related projects from public applicants, were assigned to the Renewable Resource Development Program. Another 9 lower-ranking projects, including all remaining privately owned projects, were assigned to the Water Development Program. All remaining projects were assigned to the Renewable Resource Development Program. Thus, one-third of the projects are ranked for funding under the Water Development Program and two-thirds of the projects are ranked under the Renewable Resource Development Program, proportionate to the anticipated funding split.

Figures 1.1 and 1.2 show the number and types of projects that were considered and the number of applications submitted by different types of applicants. Figure 1.3 depicts the amount of grant funds requested for the various project types.

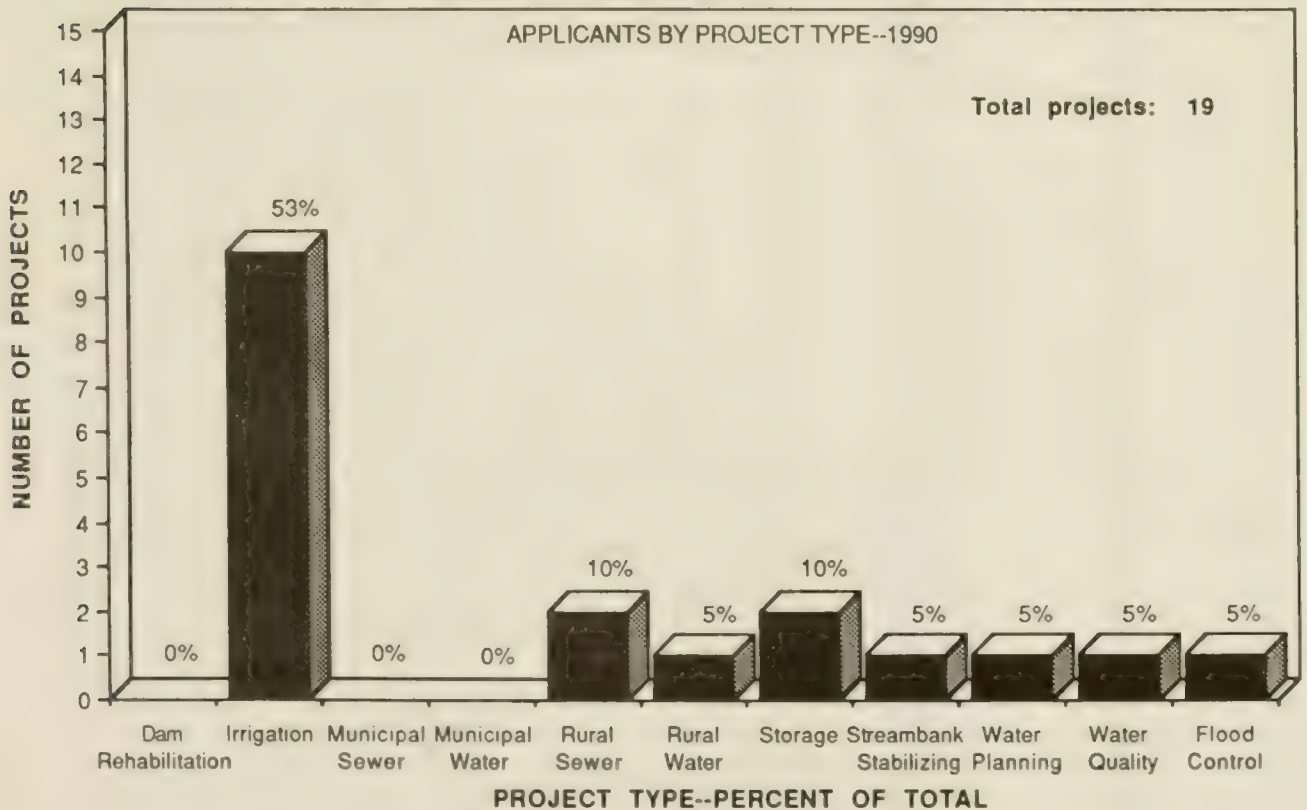
Table 1 lists the 19 projects that have been assigned to the Water Development Program. The table details the priority ranking and funding recommendations for each of the water projects.



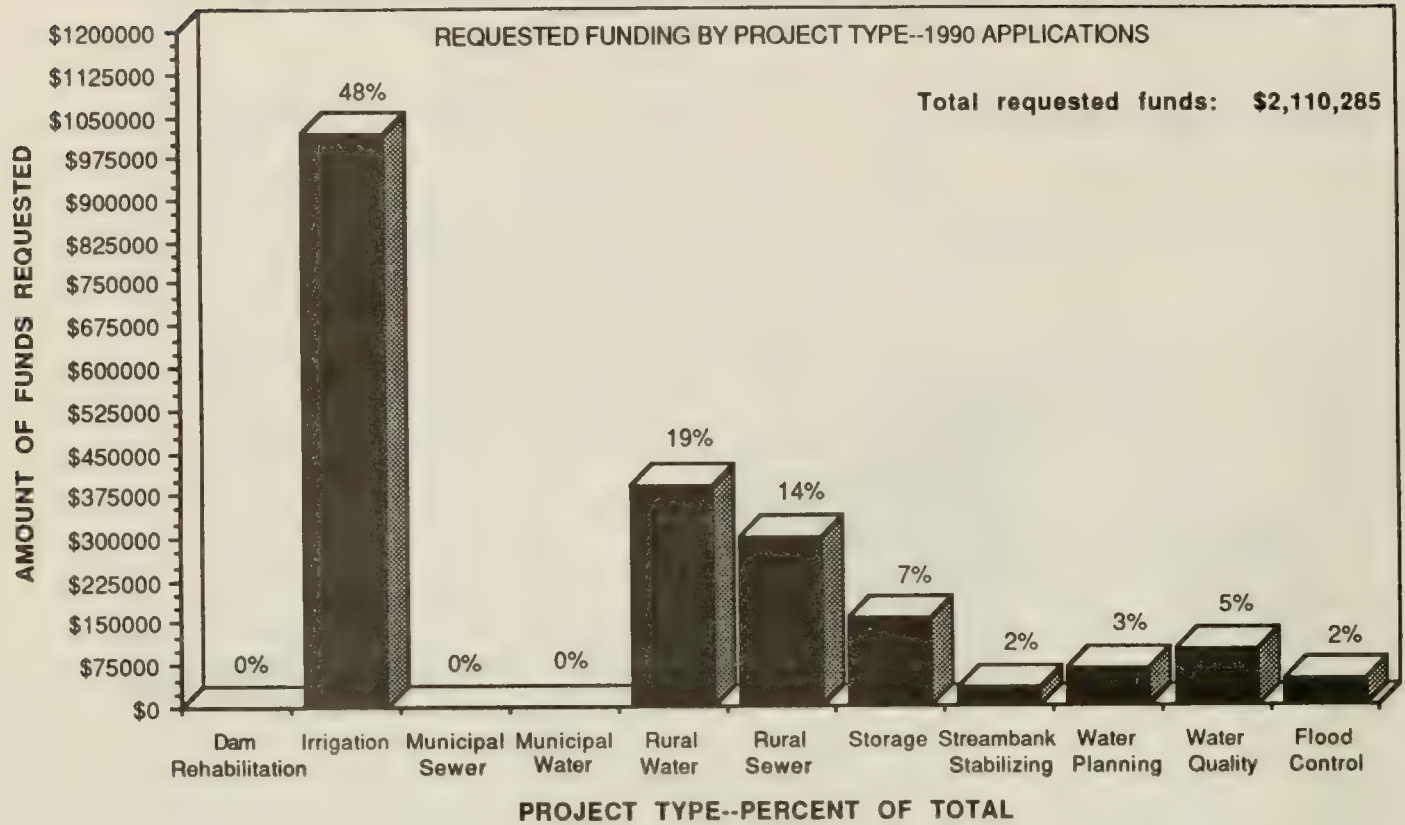
**FIGURE 1.1**  
**WATER DEVELOPMENT PROGRAM--GRANTS AND SMALL LOANS**



**FIGURE 1.2**  
**WATER DEVELOPMENT PROGRAM--GRANTS AND SMALL LOANS**



**FIGURE 1.3**  
**WATER DEVELOPMENT PROGRAM--GRANTS AND SMALL LOANS**



**TABLE 1**  
Water Development Program  
1991 Project Recommendations

Project No. & Rank Score (#-WD-RRD)	Project Sponsor	Project Name	Funding Recommended	Est. Cumulative Funds Available \$ 700,000
1-65-47	Chinook Irrigation Dist.	Milk River Supply Project	\$ 100,000	600,000
2-61-45	Lower Musselshell Cons. Dist	River Management Tools	72,539	527,461
3-61-45	Glasgow Irrigation Dist.	Improving Water Use	100,000	427,461
4-60-44	Greenfields Irrigation Dist.	Greenfields Gravity Irrigation	100,000	327,461
5-59-44	Montana State Library	Drought Monitoring System	58,364	269,097
6-59-43	Flathead Joint Board	Irrigation Information System	92,000	177,097
7-58-42	Lewis & Clark County Cons. Dist.	Nolan Water Cons. Project	100,000	77,097
8-54-37	Private Applicant	Dam Feasibility Study	14,708	62,389
9-51-37	Fort Shaw Irrigation Dist.	Rehab Headworks and "A" System	50,000	12,389
10-51-36	Dutton, Town of	Dutton Water Reservoir	91,319	0
11-49-44	Private Applicant	Wastewater Treatment/Collect System	50,000	0
12-49-31	Private Applicant	Fishery Improvement Project	15,000	0
13-49-35	Phillips Cons. Dist.	Moisture Monitoring Project	53,382	0
14-47-37	MT Bureau of Mines and Geology	Hydrologic Control re: SE Mobility	98,778	0
15-47-31	Granite Cons. Dist.	Demonstration Ice Block	67,787	0
16-43-30	Private Applicant	Cherry Creek Flood Control	21,800	0
17-37-29	Private Applicant	River Road Stabilization	5,000	0
18-0-0	Private Applicant	Sun River Water System	0	0
19-0-0	Private Applicant	Crow Creek Lining Project	0	0

Highlighted projects are those eligible for funding only under the Water Development Program because they are submitted by private entities.

Project No.: WD-1

APPLICANT NAME: Chinook Irrigation Division Association

PROJECT/ACTIVITY NAME: Milk River Water Supply Project Rehabilitation and Betterment

AMOUNT REQUESTED: \$ 100,000 - Water Development Program Grant  
\$ 100,000 - Renewable Resource Development Program Grant

OTHER FUNDING SOURCES AND AMOUNTS: \$ 300,000 - Reclamation and Development Grants Program  
\$1,002,775 - Applicant  
\$4,508,325 - U.S. Bureau of Reclamation Loan

TOTAL PROJECT COST: \$6,011,100

PROJECT DESCRIPTION:

The 172 farms within the Chinook Irrigation Division Association comprise just over 38,000 irrigated acres of the 92,000-acre Milk River Irrigation Project. The project facilities are operated by the U.S. Bureau of Reclamation. Most of the facilities for the five irrigation districts that make up the Chinook Division were financed and constructed before 1911. Because many of the project structures are more than 70 years old, they have become obsolete, inefficient, and in some cases hazardous to project operators.

The Chinook Division Irrigation Association intends to repair and replace some existing structures and add new structures as part of a basin-wide program to reduce chronic water shortages that have plagued the Milk River drainage. Based on preliminary engineering design work, project rehabilitation costs for the Chinook Division are estimated to be \$6,011,100 (1989 dollars). The association is seeking a U.S. Bureau of Reclamation Small Projects loan for \$4,508,325 to help finance the rehabilitation effort. In order to secure the interest-free, 30-year federal loan, the districts must meet a 25 percent local cost-share requirement. The districts have applied for a total of \$500,000 in grants from the Water Development, Renewable Resource Development, and Reclamation and Development grant programs. These grant funds, together with a \$1,002,775 local contribution, will meet the local cost-share requirement for the federal loan.

The project will involve lining about 53 miles of canals and laterals; cleaning and reshaping 35.8 miles of main canal and 41 miles of laterals; cleaning and reshaping 76.5 miles of drains; installing access roads on the main canals and some laterals; installing three concrete rating structures on main canals and laterals; rehabilitating two pumping stations, a diversion structure,



and a headworks structure; replacing seven siphons and installing two new siphons; replacing a wasteway; repairing or replacing 12 checks; and installing 106 measuring devices on canals and laterals. This rehabilitation effort would reduce irrigation water shortages by an estimated 9,870 acre-feet annually. Program grant funds would be used to complete final engineering designs for the proposed improvements and to clean, reshape, and line canals and laterals; clean and reshape drains; and install access roads.

#### TECHNICAL ASSESSMENT:

Under historical climate conditions and at the present level of development, Milk River irrigators can expect to face significant water shortages in 6 years out of 10. The average annual shortages are estimated at 122,600 acre-feet or about twenty percent of diversion requirements. These shortages are expected to increase by about 28,000 acre-feet per year in the future when Canada and tribes on the Fort Belknap Reservation make use of their legal share of Milk River waters.

The Milk River basin has been the subject of an intensive joint effort between the irrigation districts in the basin, the U.S. Bureau of Reclamation, DNRC, and others to develop a strategy to reduce chronic water shortages. A water supply simulation model developed for the basin, irrigator surveys, and field investigations have revealed that shortages are caused by periodic severe droughts, overdevelopment of acreage for irrigation relative to the water supply the project was originally designed to provide, and an aging distribution system that is unable to carry enough water to meet the demands of current irrigation operations. As a result of these efforts, a three-phase plan for the Milk River was formulated that is aimed at improving management of available water, increasing water use efficiency through structural rehabilitation of the entire system, and increasing the basin's water supply.

The proposed project is part of the second phase of a technically sound, well-documented, and well-supported strategy to reduce water shortages. Successful completion of the proposed project may be especially important because it will result in the first substantial, on-the-ground improvements to local facilities arising from the multi-year basin planning effort. In addition, this effort may help pave the way for financing future system improvements through the federal Pick-Sloan program.

Final project designs will be approved by the U.S. Bureau of Reclamation.

#### FINANCIAL ASSESSMENT:

All grant funds will be used to fund construction during the first three years of the seven year design and construction period. Final design and engineering is expected to cost almost \$800,000 and construction costs are estimated at about \$5.2 million. Cost estimates for the project were developed jointly by engineers from DNRC and the U.S. Bureau of Reclamation. The construction costs of the project are lower than might be expected because much of the work will be done by the irrigation district.

Farm budget studies by the Bureau of Reclamation indicate that under current conditions, the ability of the district irrigators to pay for improvements is zero. A survey of irrigators showed that they would be willing

to pay up to \$5.00 per acre per year for these improvements, in spite of the fact that doing so would reduce their disposable income below Bureau of Reclamation guidelines.

Current project assessments for irrigated acreage within the Chinook Division average \$6.50 per acre per year. Without the grant money, annual costs to irrigators for the small projects loan would increase by \$5.60 per acre per year. With all of the grant money requested, annual payments will increase by \$3.90 per acre per year.

ENVIRONMENTAL NOTE:

The project would have positive environmental impacts on some resources and negative environmental impacts on others. The most significant negative impact would be the loss of over 700 acres of vegetation and wildlife habitat as a result of construction, ditch cleaning, and a reduction in seepage which sustains some of these areas. Wildlife habitat loss may be mitigated to some extent by re-establishing some habitat along rights-of-way and off-site improvement of habitat at Lonesome Lake near Big Sandy. Groundwater recharge in some areas will also be reduced. Positive impacts are also associated with decreasing the volume of leakage from the distribution system, and include reducing the extent of water-logged and seep-affected agricultural and residential lands and improved groundwater quality.

RECOMMENDATIONS:

A grant of up to \$100,000 is recommended contingent upon DNRC approval of the scope of work and budget and the association designating a suitable public entity to receive and administer the grant funds. The grant is also contingent on the association securing the remainder of project funding.

Project No.: WD-2

APPLICANT NAME: Lower Musselshell Conservation District

PROJECT/ACTIVITY NAME: River Management Tools for the Musselshell River Basin

AMOUNT REQUESTED: \$ 72,539

OTHER FUNDING SOURCES AND AMOUNTS:

\$	5,000	- Lower Musselshell Conservation District (in-kind)
\$	132,600	- Private
\$	8,100	- Department of Health and Environmental Sciences
\$	6,000	- U.S. Bureau of Reclamation
\$	6,000	- Department of Natural Resources and Conservation
\$	5,000	- Deadman's Basin Water Users Association

TOTAL PROJECT COST:

\$ 235,239

PROJECT DESCRIPTION:

The Lower Musselshell Conservation District requests funding to implement an irrigation water management program for the Musselshell River and its water storage reservoirs. Funding will be, primarily, for the purchase and installation of continuous recording devices at water diversions from the river and at reservoir release structures.

The Musselshell River flows through central Montana from its headwaters in the Little Belt Mountains, east to Melstone, and then north into Fort Peck Reservoir. The Musselshell River and its tributaries irrigate nearly 99,000 acres of land. Six major reservoirs have been built within the basin to store spring run-off flows to augment low-flow periods later in the season. Irrigators receive water through a system of publicly and privately owned canals and by pumping directly out of the river. Several communities also depend on the river for domestic and commercial water supply.

Water shortages are a chronic problem for irrigators and other users along the Musselshell. Past studies by DNRC and the U.S. Bureau of Reclamation failed to identify additional storage sites. In 1987, the district received a grant from DNRC to investigate the magnitude and frequency of the water shortages and to recommend alternative water management strategies to alleviate these shortages.

From preliminary study recommendations, the Deadman's Basin Water Users Association recently initiated a water ordering and management program. Water ordering was initiated during the 1990 irrigation season; water management devices must be installed before delivery of stored contract water begins in the 1991 irrigation season. This means that approximately 18 river diversions and 20 pumping stations must have measuring and continuous recording devices installed at the expense of the contract water holders.

The Lower Musselshell Conservation District, with DNRC's assistance, developed a plan to continuously measure flows within the basin to allow water managers within the Deadman's Basin system to more efficiently deliver water orders. According to the plan, tributary inflows and diversion flows will be measured, delivery system seepage loss and failures detected, and reservoir content and release rate data collected. The portion of water released down each canal system will also be determined.

TECHNICAL ASSESSMENT:

This application requests funds for the implementation phase of a water management plan and water availability study developed jointly by the Lower Musselshell Conservation District, Deadman's Basin Water Users Association, and DNRC. The local water users and resource managers have been instrumental in developing a water management plan that addresses needs throughout the basin. They have also demonstrated their willingness to participate in an overall water management strategy by requiring contract water to be ordered and requiring measuring devices and recorders to be installed for all diversions which take contracted water from the river. Approximately 70 percent of all contracted



water holders also have direct diversion rights from the river; therefore a majority of diversions will be measured. It is assumed that direct diverters will also install measuring devices to protect their water rights.

The U.S. Bureau of Reclamation will provide technical assistance to the district by determining the flow capacities of major supply canals and by specifying the correct placement and type of measuring device to be installed. The manager/ditch rider for Deadman's Basin Water Users Association and personnel from the district will collect and analyze flow data and will coordinate contract water ordering. DNRC will continue to provide technical advice.

FINANCIAL ASSESSMENT:

The entire project is estimated to cost \$235,239. Of the \$72,539 grant request, \$11,995 would be for salaries, \$51,950 for equipment and computer hardware and software, \$3,000 for maintenance contracts and \$5,594 for contingency costs.

By the summer of 1991, 18 private ditch companies will have installed approximately 36 continuous recording devices at a total cost of \$54,000. Along with the installation of weirs and flumes on the same ditches, the private ditch companies will have contributed over \$132,000 toward this project.

ENVIRONMENTAL NOTE:

The impact of this water management plan should be positive, through improved water use efficiencies, maintained or increased in-stream flows, and reduced return flows carrying sediments, pesticides, nutrients, and salt back to the river. Slight impacts to water quality will occur as measuring devices are constructed and installed; however these impacts will be short-term. Overall project benefits will be high.

RECOMMENDATIONS:

A grant of \$72,539 is recommended contingent on DNRC approval of the project scope of work and budget.

Project No.: WD-3

APPLICANT NAME: Glasgow Irrigation District

PROJECT/ACTIVITY NAME: Improving Water Use efficiency

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 100,000 - Applicant  
\$2,000,000 - Bureau of Reclamation  
(Rehabilitation and Betterment Loan)



TOTAL PROJECT COST:

\$2,200,000

PROJECT DESCRIPTION:

The Glasgow Irrigation District encompasses approximately 18,000 acres of irrigable land. The irrigation facilities that serve this district were constructed from 1915 to 1917, and many of the canals and other facilities are in need of rebuilding and rehabilitation. Water for the district's land is obtained from the Milk River.

A previous study has determined that over 30 miles of canal and laterals should be rehabilitated in order to prevent the seepage losses that now occur. The district proposes to line approximately 22 miles of laterals with slip-form concrete or buried PVC lining. Eight miles of the Vandalia Canal will be lined with compacted earth. Additional work calls for 48 miles of drains to be rehabilitated, extended, or constructed.

The project is estimated to cost \$2.2 million with \$440,000 to be spent annually over the next five years.

TECHNICAL ASSESSMENT:

Studies by the U.S. Bureau of Reclamation indicate that unlined canals and laterals have resulted in excessive water losses, poor service to water users, difficult water management, high groundwater conditions, and high operation and maintenance costs. As a result, the Bureau of Reclamation is recommending that a Rehabilitation and Betterment program be developed. Selected reaches of an 8-mile length of Vandalia Canal will be lined with compacted earth lining from upper bank materials. Another 22 miles of laterals will be lined with slip-form concrete lining, buried PVC membrane lining, or re-constructed as pipe laterals. Approximately 500 linear feet of the initial reach of Vandalia Canal will be lined with reinforced concrete. Open drains will be deepened and realigned and new drains will be constructed. This will improve removal of irrigation wastes and surface runoff that has resulted in saline seeps. Parshall Flume measuring devices will be installed at the diversion points of project laterals and at farm turnouts of the laterals that are scheduled for rehabilitation. The project will also establish wildlife corridors along most of the affected rights-of-way and mitigation areas on federal land.

The application does not address the amount of water lost from canals and laterals, alternatives that may or may not have been investigated, or standards that are to be met. It is anticipated that the application for the Rehabilitation and Betterment loan from the Bureau of Reclamation will address these items.

FINANCIAL ASSESSMENT:

The total estimated project cost is \$2.2 million. The district proposes to obtain a \$100,000 grant from DNRC and a \$2.0 million dollar loan from the Bureau of Reclamation's Rehabilitation and Betterment program, and to make a \$100,000 contribution from the Glasgow Irrigation District's funds.

The \$100,000 in DNRC grant funds would be used to pay for \$4,250 in administrative salaries and \$1,675 associated administrative costs; \$8,600 for a project engineer; and \$85,475 for construction. Construction costs as defined

in the application appear to be reasonable; however, because of limited amount of available information, an accurate assessment cannot be made. Better defined cost estimates will no doubt be presented in the Rehabilitation and Betterment loan application.

ENVIRONMENTAL NOTE:

Environmental benefits of the proposed improvements to the irrigation system will include a water savings due to the reduction of seepage losses, less erosion and siltation, and a reduction in the amount of land affected by saline seepage.

Intensive maintenance activities such as ditchbank weed control by spraying, burning, and mowing; and the channel stabilization work such as dredging, sloping, and reshaping will be substantially reduced in areas of the project that are rehabilitated. The use of weed control chemicals for ditchbanks and aquatic weed control will be reduced. Adapted native vegetation proposed to be planted on canal and lateral rights-of-way will reduce maintenance needs and prevent establishment of noxious weeds.

The perennial mosquito problem will be alleviated because of reduced seepage on agricultural lands. Wildlife mitigation will compensate for habitat losses resulting from the project.

RECOMMENDATION:

DNRC is recommending that a grant in the amount of \$100,000 be issued to this project contingent upon receipt of the Bureau of Reclamation Rehabilitation and Betterment loan and approval by DNRC of the scope of work and budget.

---

Project No.: WD-4

APPLICANT'S NAME: Greenfields Irrigation District

PROJECT/ACTIVITY NAME: Greenfields Irrigation District Gravity Sprinkler Planning

AMOUNT REQUESTED: \$ 100,000 - Grant

OTHER FUNDING SOURCES & AMOUNTS: \$ 148,500 - Bureau of Reclamation  
\$ 48,500 - Greenfields Irrigation District

TOTAL PROJECT COST: \$ 297,000

PROJECT DESCRIPTION:

The Greenfields Irrigation District requests funds to plan and design gravity pressurized sprinkler systems. The district plans to apply to the U.S. Bureau of Reclamation for construction funds through the Pick-Sloan Program.

Based on the proposed study, lands that are currently irrigated by canals and on-farm sprinkler systems will be converted to gravity pipeline systems; canals and pumps will be eliminated. Benefits will include water and electrical energy conservation, and improved water quality.

As the first step, \$100,000 in DNRC funds are requested to develop a detailed report to include farm budget studies, an environmental study of existing water operations, an environmental impact of the proposal, a soils study, a required water quantity analysis, designs and specifications, and a cost-benefit summary. The Greenfields Irrigation District plans to have the Bureau of Reclamation prepare the detailed report.

#### TECHNICAL ASSESSMENT:

Gravity irrigation systems are technically sound systems that are very reliable, simple to operate, require little maintenance, and if properly installed can be expected to last many years. Water is transported through pipelines from an elevated source to lower level irrigated areas. The systems allow for a closed water delivery system to irrigated areas, and efficient application of water on irrigated land by sprinkler methods. The improved delivery efficiency and the improved water application method on the land conserves water. The improved distribution of water reduces water misplacement and unnecessary transportation of elements, especially in groundwater. Relying on gravity instead of pumps conserves energy.

The Greenfields Irrigation District has approximately 15,000 acres of land with gravity irrigation potential. The Spring Valley Bench (5,600 acres) and the Ashveldt Bench (6,000 acres) are the two largest potential areas. Other areas are scattered throughout the district.

Developing a report to assess soils, water usage, topography and environmental concerns as proposed by this application is an essential step, not only to secure the required Pick-Sloan Program monies from the Bureau of Reclamation, but also as a valuable tool in coordinating the engineering design of the system.

#### FINANCIAL ASSESSMENT:

The applicant is estimating total project costs of \$297,000. These costs include \$9,400 for water user meetings, entity organization, and petitioning, including legal costs; \$15,600 for a farm budget study; \$10,400 for a soils and water budget study; \$63,500 for an environmental study; \$63,500 for the collection of data for environmental study including well installations and monitoring, water sampling analysis of domestic and non-domestic water sources, monitoring chemical and nutrient use, fish and game tabulations; \$100,000 for engineering design and cost estimates; \$10,400 for report writing; and \$15,800 for miscellaneous travel, communication, office, supply, accounting, and legal costs. An amount of \$8,400 would be held for contingency costs. The \$100,000 DNRC grant funds requested would be used for professional salaries.

The Bureau of Reclamation estimates the cost to install the planned improvements will be \$9 million.



ENVIRONMENTAL NOTE:

Several environmental benefits are realized by converting canal systems to pipeline gravity irrigation systems. First, less irrigation water will be diverted from the Sun River. By transporting the irrigation water in pipelines instead of canals and laterals, water losses will be eliminated and the ability to efficiently deliver water will be increased. The district estimates that an annual water savings of 24,000 acre-feet will result from the installation of the pipelines, a 55 percent water savings over the current use. Reduced water diversion will result in higher summertime flows in the Sun River and/or more water for other uses.

Currently there are approximately 2,250 acres irrigated by the pump sprinkler irrigation system in the project area. The installation of the gravity pipeline system will eliminate the use of pumps at an annual savings of 2,200 kWh.

Erosion and silting problems associated with canals will be greatly reduced. This will preserve topsoil and improve the water quality of return flows.

RECOMMENDATION:

DNRC recommends a grant of \$100,000 for this project for the preparation of the report described. The grant is contingent upon DNRC approval of the scope of work and budget and the district securing the other funds indicated.

---

Project No.: WD-5

APPLICANT NAME: Montana State Library

PROJECT/ACTIVITY NAME: Drought Monitoring System

AMOUNT REQUESTED: \$ 64,364

OTHER FUNDING SOURCES & AMOUNTS:

\$ 9,300	- Montana Climate Center, in-kind
\$ 12,960	- U.S. Soil Conservation Service, in-kind
\$ 9,666	- Montana State Library-Natural Resource Information System, in-kind
\$ 21,387	- DNRC, in-kind

TOTAL PROJECT COST: \$ 117,677



#### PROJECT DESCRIPTION:

Montana suffered from drought impacts of varying severity throughout much of the 1980s. Since the state's ability to respond adequately to drought is a high priority, drought management was selected as one of two issues for the 1989-90 state water planning cycle. The proposed project will implement two of the recommendations that were developed during the state water planning process. The first project task will be to improve drought monitoring; this will include three components:

1. Calculation of the Palmer Drought Index for smaller geographic areas
2. Development of a Surface Water Supply Index applicable to specific Montana drainage areas dependent on mountain snowmelt
3. Coordination in the collection, interpretation, and reporting of drought forecasting and monitoring information

The Palmer Drought Index is calculated for seven broad regions of Montana; these regions are too large for use in identifying smaller, isolated areas of intense drought. The Montana Climate Center will use the National Weather Service data to calculate the Palmer Drought Index for several smaller geographical areas. Also, the Palmer Drought Index is inappropriate for forecasting streamflows in drainage areas primarily dependent on mountain snowmelt. The Soil Conservation Service has Surface Water Supply Indexes for 23 Montana river basins, but considerable work remains before the indices are refined and reliable. Under this grant, fifteen additional Surface Water Supply Indexes will be developed for the northwestern region of the state.

Several agencies are involved in drought monitoring and reporting. The National Resource Information System (NRIS) at the State Library will use its Geographical Information System to quickly generate maps showing the Palmer Drought Index and Surface Water Supply Index values across the state, and DNRC will interpret and assimilate these maps and other drought forecasting information into a concise Surface Water Supply Report. DNRC will undertake a special effort to improve media reporting of water supply and drought forecasts during critical times of the year. Water supply and drought forecasting information will also be accessible by computer modem through NRIS.

The second part of the proposed project is to develop a new Montana Drought Plan to replace the plan developed in 1985. The new drought plan will address the following four elements of drought management:

1. Those goals and management responsibilities of government agencies, the Drought Advisory Council, and local drought advisory committees for proactive drought management and response, consistent with the recommendations of the State Water Plan
2. Key mechanisms that will be used to guide specific management actions when indicators of potential or actual drought severity reach some predetermined level

3. The federal and state assistance programs available for the prevention, mitigation, and compensation of drought-related impacts and procedures for establishing local drought advisory committees
4. Procedures and responsibilities for the timely assessment of drought impacts

The new drought plan will include a guide to developing a local drought preparedness plan so that no potentially significant drought impacts are overlooked. The guide will also contain some general ideas about how drought impacts might be prevented or mitigated, thus promoting discussion within local drought advisory committees on the options to be considered and the actions to be taken.

The Drought Monitoring System project will be a cooperative effort between DNRC's Water Management Bureau, the Montana Climate Center, the U.S. Soil Conservation Service, and the Natural Resource Information Center. NRIS will be responsible for administration and coordination of the entire project. Eight months will be required to complete calculation of the Palmer Drought and Surface Water Supply Indexes, revise the reporting procedures and compile the new state drought plan. The system will operate for 16 months using the grant funds.

#### TECHNICAL ASSESSMENT:

The Palmer Drought Index and the Surface Water Supply Index are regional indices used to forecast and measure the beginning, severity and end of drought episodes. Each index measures a separate aspect of drought. The Palmer Drought Index evaluates soil moisture conditions and is most useful in assessing drought impacts on dryland farming operations, rangeland, and forests. The Surface Water Supply Index is used to evaluate current and seasonal surface water supplies and is useful for predicting impacts to irrigation, fisheries, and water-related recreation users of surface waters.

The National Weather Service currently calculates the Palmer Drought Index for only seven regional climate districts in Montana so the extreme variability of Montana terrain is not assessed and the resulting information is too general to apply to specific locations. Up to 200 additional Palmer Drought Index values will be developed and grouped so the composite numbers correspond with the drainage basin Surface Water Supply Indexes. Thus, each basin will have both a Palmer Drought Index and a Surface Water Supply Index value unique to that drainage. The Surface Water Supply Index network will also be expanded by 15 basins. These efforts will provide the general public and government agencies with substantially more useful drought monitoring data.

The Drought Monitoring System project will provide regular moisture reports in a quickly and easily understood format to be more widely reported by the news media.

A new state drought plan will be developed by DNRC's Water Management Bureau. The new plan will address the State Water Plan Advisory Council's call to improve the state's drought management effort. The State Water Plan Advisory

Council believes that local drought problems are best solved at the local level, with the state providing information, guidance and support where it can. Thus, a guide produced for local drought advisory committees will be most useful.

FINANCIAL ASSESSMENT:

The project is estimated to cost \$117,667. Grant funds would cover \$64,364 of the project cost, with \$46,181 allocated to personal services and benefits and the remaining \$18,183 to operating expenses including contracted services, supplies and materials, travel, and indirect costs for the portion of salaries and operating expenses associated with services to be obtained from MSU's Montana Climate Center.

The monitoring component would use \$54,114 of the grant funds and drought plan development the remaining \$10,250. In-kind services provided by NRIS, the Soil Conservation Service, and the Montana Climate Center to expand the drought monitoring system will amount to \$31,926. DNRC's Water Management Bureau will contribute \$21,387 in in-kind services split between analyzing and disseminating information on moisture conditions and overseeing the development of a revised drought plan.

ENVIRONMENTAL NOTE:

There will be no adverse environmental impacts from this project. Substantial positive environmental impacts will occur if the developed information is effective in providing a foundation for local and state action to prevent drought impacts.

RECOMMENDATIONS:

DNRC recommends a grant of up to \$58,364 contingent on DNRC approval of the scope of work and budget. DNRC will provide staff to revise the State Water Plan instead of relying on graduate student assistance. Thus \$6,000 in costs associated with the graduate student were dropped from the funds requested. DNRC's match contribution will be increased by these costs.

---

Project No.: WD-6

APPLICANT NAME: Joint Board of Control - Jocko, Mission, and Flathead Irrigation Districts

PROJECT/ACTIVITY NAME: Flathead Irrigation Information System

AMOUNT REQUESTED: \$ 92,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 7,000 - Joint Board of Control  
\$117,000 - Bonneville Power Administration  
\$ 88,500 - U.S. Bureau of Reclamation  
\$ 12,000 - Mission Valley Power

TOTAL PROJECT COST: \$316,500



#### PROJECT DESCRIPTION:

The project coordinator will initiate an irrigation information system and gather data to provide irrigation information and education to the Flathead, Mission, and Jocko irrigation districts. The objective of the program is to improve the cost-effectiveness of irrigated agricultural operations in the Flathead River basin. Irrigators will learn to improve the efficiency of irrigation water use and as a result, may expect an improvement in crop yields, as well as reductions in fertilizer, pesticide, and energy use.

In short, irrigators will learn how they can improve the economics of their irrigation operations by employing better on-farm water management skills. The irrigation information and education program will involve six principal components:

1. An irrigation information system that, based on weather data and other input, will predict crop water demands.
2. A monitoring project representing the full range of soil and crop types within the district; crop growth stage and soil moisture information will be combined with predicted crop water demands to develop weekly irrigation schedules to be provided, by news release or telephone, to district irrigators.
3. Energy and water use irrigation system audits for all monitored irrigation systems will be prepared with recommendations toward improving the mechanical performance and operation of each system.
4. Demonstrations of an educational computer software package, adapted to local conditions, will be used to simulate the changes that occur in soil moisture when irrigation systems or practices are modified.
5. The production of an irrigation guide tailored to local soil types, crops and climate conditions found in the district.
6. An assessment of the character of water use and the potential for improving crop yields and operation profitability, including a summary of project results and strategies recommended for state-wide implementation.

This project is a continuation of a similar effort started in 1989 by the Bonneville Power Administration (BPA), in cooperation with the Bureau of Reclamation, Mission Valley Power, and various local water user and producer groups. The previous project was established to reduce irrigation related electrical energy consumption. BPA now believes the program is not justified from an electrical energy conservation standpoint. The applicant hopes to continue the program because irrigation scheduling improves crop yields and reduces net production cost. Grant funding is requested to replace BPA funds and to include additional areas of the Flathead Irrigation Project.



#### TECHNICAL ASSESSMENT:

The project will be conducted in an area of the state where many, often conflicting, user and end-use demands for water exist. Irrigation water use on 15,000 to 20,000 acres of land could be directly affected by this phase of the project. A considerably larger area could be affected if tribal and non-tribal owners of acreage elsewhere in the district take advantage of the advertized irrigation schedules.

The project proposal takes a sound approach in improving resource-use efficiency by demonstrating that on-farm water management improvements can increase the viability of an irrigation operation. The technical methods proposed are similar to those used successfully in a smaller area in 1989 and 1990; quantitative documentation of yield increases, water savings, and input cost reductions from these efforts is not well presented in the application, however.

#### FINANCIAL ASSESSMENT:

Overall project costs are estimated at \$316,500; these include the costs incurred during the first two years of the project in 1989 and 1990. Total project costs for the next two years will be \$168,000. The applicant's request for \$92,000 would be used to secure the services of the irrigation consulting firm that carried out the field and information/education work over the past two years. The installation, operation, and maintenance of two AgriMet weather data stations will be paid from funding sources such as the U.S. Bureau of Reclamation.

Budget projections were made based on work already accomplished during the first year of the project and on the Bureau of Reclamation's and the BPA's experience with similar programs elsewhere.

#### ENVIRONMENTAL NOTE:

The project will have positive environmental impacts to the extent that it conserves water and energy for other uses, and prevents fertilizers and pesticides from leaching through the root zone or entering runoff. No adverse environmental impacts are expected.

#### RECOMMENDATIONS:

DNRC recommends a grant in the amount of \$92,000 contingent upon approval of the scope of work and budget. The final report should include a comparison of crop yields, input costs, and water use for representative fields in the project area, before and during the project.

Project No.:

WD-7

APPLICANT NAME:

Lewis and Clark County Conservation District

PROJECT/ACTIVITY NAME:

Nilan Water Conservation Project

AMOUNT REQUESTED:

\$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS:

\$ 600 - Applicant

\$ 11,400 - SCS

\$ 72,400 - Nilan Water User's Association

\$ 70,000 - ASCS

TOTAL PROJECT COST:

\$ 254,400

PROJECT DESCRIPTION:

The Nilan Water Conservation Project is located in the northern part of Lewis and Clark County, seven miles west of Augusta. The East Outlet Canal from Smith and Ford creeks diverts water to irrigate lands along Willow Creek, Smith Creek, and Elk Creek, which is the south fork of the Sun River.

Nilan Reservoir occupies parts of sections 17, 18, 19, 20, T20N, R7W and Section 24, T20N, R8W. From the reservoir, the East Outlet Canal diverts in Section 20, T20N, R7W and extends 3.5 miles south to where it empties into Smith Creek in the vicinity of Augusta. Irrigated lands are located primarily south of Augusta.

The Lewis and Clark County Conservation District proposes to line 9,200 feet of the East Outlet Canal, and then to evaluate on-farm irrigation systems serving 3,900 acres. In the spring of 1990, approximately 5,200 feet of the lower East Outlet Canal were lined; however, because of the large amounts of seepage from the canal, additional lining is required.

Evaluation of on-farm irrigation systems and management and the development of resource management systems to use the available water in the most efficient manner will also be conducted. This part of the project would increase the on-farm production of grains and forage, while consuming less water.

The project schedule indicates that the work will take one year to complete.

TECHNICAL ASSESSMENT:

Analysis by the Water Resources Division of DNRC indicates that approximately 35 to 40 percent of the water released from the Nilan Reservoir is lost through canal seepage before it reaches the delivery point. These canal losses, coupled with low reservoir levels in recent years, have resulted in many

water users receiving only 25 to 30 percent of their water requirements. The lining of the canal will minimize the seepage losses and provide additional water to the user.

The applicant had a preliminary engineering investigation completed by SCS engineers. The method of lining recommended will require the placement of a buried plastic liner in the canal. The applicant plans to investigate the use of various liner materials.

Alternatives to the liner were investigated. The "do nothing" alternative will not solve the problem and was therefore rejected. Another alternative considered was to raise the Nilan dams. This alternative would make additional water available to the water users but was rejected because of continued canal seepage, a poor cost-benefit ratio, and a need to acquire additional land and a permit for an additional water right.

Lining the canal with bentonite was also investigated. The cost of using bentonite would be less than the PVC liner, but it would be a less effective and durable liner.

Efficient use of water as it is applied to each field is important in sound irrigation practice. The district plans to employ a qualified person to conduct a detailed investigation of the on-farm irrigation practices. Recommendations will be implemented with future financial assistance from ASCS or SCS.

#### FINANCIAL ASSESSMENT:

The Lewis and Clark County Conservation District requests a grant of \$100,000 for the construction, inspection, and contract administration of the lining of 9,200 feet of the East Outlet Canal. Part of this grant would also be used for technical assistance to the Nilan Water Users' Association members for evaluation of on-farm irrigation systems serving approximately 3,900 acres. As a demonstration project, this proposal offers the opportunity to benefit water users throughout the state.

The grant requested would cover about 40 percent of the costs of the entire project. The conservation district has a limited budget, but will provide \$600 for in-kind services, primarily in the contract administration of the project. The Soil Conservation Service will provide in-kind services totaling \$11,400. The SCS will contribute the design and layout of the canal lining, post-construction evaluations of the effectiveness of the lining, training of the employee doing the on-farm evaluations, and follow-up with the farmers after the evaluations have been made.

The Nilan Water User's Association will continue to provide in-kind service for the contract administration. It will also contribute \$72,400 to the cost of the project. The association also has a limited budget, with about \$25,000 to \$30,000 in its reserve fund at this time. Much of the reserve was tapped for delivery system improvements in 1990. The association will levy a special assessment to its members, or obtain money from an outside source, to fulfill its contribution to this project.



The ASCS has cost-share monies available for water conservation projects. The ASCS Director in Lewis & Clark County has indicated that Pooling Agreement funds of \$70,000 will likely be approved for this project, provided the budget allocation for this program was not cut by the time the funds were needed. The Nilan Water Users Association will begin the application process later in the summer of 1990 in order to obligate monies for possible construction in 1991.

ENVIRONMENTAL NOTE:

This project will conserve water by eliminating seepage from the East Outlet Canal and by maximizing the efficiency of on-farm irrigation systems. The project will also conserve land by reversing irrigation-induced salinization, and will save energy by improving existing pressure systems and emphasizing good irrigation water management. The project will improve domestic water quality by optimizing on-farm irrigation systems, thus reducing leaching of pesticides and nutrients to the groundwater. Soils will benefit by reversing irrigation-induced salinization. Water will be made more available to the public by increasing instream flows in Smith, Ford, and Elk creeks, and by maintaining stable volumes in the Nilan Reservoir. Agricultural water supplies will be improved by eliminating seepage in the East Outlet Canal and improving on-farm efficiencies.

Public recreational interests will be enhanced by improving the fisheries and pool level in Nilan Reservoir. Improved fisheries in Smith, Ford, and Elk creeks should also be realized. Property damage will be prevented by reversing salinization on irrigated lands and adjacent lands.

RECOMMENDATION:

A DNRC grant of \$100,000 is recommended contingent upon the applicant securing funding from other sources. Approval by DNRC of the scope of services and budget is also required.

---

Project No.: WD-8

APPLICANT NAME: Private Applicant

PROJECT/ACTIVITY NAME: Ruby Creek Dam - Feasibility Study

AMOUNT REQUESTED: \$ 55,130

OTHER FUNDING SOURCES AND AMOUNTS: \$ 3,700 - Private Applicant

TOTAL PROJECT COST: \$ 58,830

PROJECT DESCRIPTION:

Funding is requested for a feasibility study of a moderate-size irrigation dam on Pioneer Creek near its confluence with Ruby Creek. The project site is about 20 miles southwest of Wisdom in Beaverhead County. The dam will be used



to store irrigation water but also has the potential of providing other benefits, such as fisheries, recreation, and flood control. Assessing these benefits would be an important part of the study.

The total anticipated dam construction cost will be over \$1 million. No preliminary economic analyses have been made. Federal land (U.S. Forest Service) would be flooded by the project.

#### TECHNICAL ASSESSMENT:

The proposed dam will be about 2,100 feet long by 64 feet high. It will have a surface area of about 175-200 acres at maximum pool and will store about 3,600 to 4,000 acre-feet of water. Some preliminary work done by the Soil Conservation Service 22 years ago indicates that a dam at the chosen site will likely be technically feasible.

The project has not been analyzed technically in light of current dam design and safety criteria. The geologic and other investigations done by the SCS 22 years ago were very preliminary.

New storage water rights could be a major problem according to the Water Rights Bureau at DNRC. The bureau indicated that it is virtually impossible to currently obtain a new appropriation in the Big Hole basin. Pending court cases may change this.

#### FINANCIAL ASSESSMENT:

The cost of the requested study grant is approximately five percent of the anticipated \$1 million dam construction cost. This is a high percentage for an initial feasibility study. But considering all the technical, environmental, legal, and other factors, this cost seems reasonable for this project, especially if it is to serve as a public demonstration project as suggested by the applicant. Grant funds would be used to pay for professional salaries, consultants, and related costs.

There is not yet enough information to determine if the dam construction project is economically feasible. Irrigation projects have historically been heavily subsidized with public funds. The feasibility to the owners will likely depend on continuation of this policy. Public benefits, such as improving fisheries with greater instream flows, could be significant in an economic assessment.

#### ENVIRONMENTAL NOTE:

The proposed feasibility study will have no environmental impact; an environmental assessment of the proposed dam would be an important component of the study. A full environmental impact statement may be necessary prior to dam construction.

#### RECOMMENDATION:

DNRC recommends a grant of \$14,708, equal to 25 percent of the project cost, for this feasibility study. The balance should come from the owners or others who might be sufficiently interested to be a financial sponsor.

The grant is contingent upon the applicant providing DNRC with a description of a phased approach to the feasibility study and obtaining appropriate water rights. The grant is also contingent on DNRC approval of a detailed scope of work and project budget, and upon the applicant securing the remainder of the project funding.

---

Project No.: WD-9

APPLICANT NAME: Fort Shaw Irrigation District

PROJECT/ACTIVITY NAME: Rehabilitation of Headworks and "A" System Diversion

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 700,000 - Bureau of Reclamation (R&B Loan)

TOTAL PROJECT COST: \$ 800,000

PROJECT DESCRIPTION:

The Fort Shaw Irrigation District requests funds for two related projects. The first project consists of constructing a jetty in the Sun River and installing new gates in the irrigation water diversion structures. The second project consists of installing a 3,500-foot diversion pipe to carry 80 cfs of irrigation water.

These projects will replace diversion headgates that were constructed in 1909 with automated gates and water measuring facilities. The jetty will protect the new diversion facilities from ice and debris damage. The diversion pipe will be constructed from the Sequist Check to the "A"-drop to alleviate concerns on the Simms Creek siphon. This siphon has a significant amount of seepage when running full and presents a potential hazard to adjacent lands.

TECHNICAL ASSESSMENT:

Installation of the jetty and modernization of the diversion gates will allow better management and efficient use of irrigation water taken from the Sun River. The water measuring device that will be installed as part of this work will allow for a constant flow into the irrigated areas. Ice and floods have caused damage to the diversion headworks, and the jetty should minimize any future damage. Installation of the jetty in the Sun River will require approval and permitting by various state agencies.

The diversion pipe will not only improve distribution of irrigation water to district lands, but will also minimize the flow of water through the Simms Creek siphon and thus lessen the potential for a washout at the head of the siphon. The amount of seepage from the siphon will also decrease. The diversion pipe will be fitted with a flow measuring device, which will allow for the accurate measurement of waters diverted to the "A"-drop.

The applicant indicates that the only alternative to the improvements proposed is to "do nothing", which is not an acceptable option because the problems would still exist. Repair of the siphon might be an alternative and would eliminate seepage and the potential for a washout. This option would not, however, improve water distribution in the district.

The Greenfields Irrigation District proposes that a concrete crest be installed instead of the rock jetty, as a more permanent solution. This alternative should be evaluated in the course of the Bureau of Reclamation's engineering design of this project.

These projects are anticipated to be completed in three to four years.

#### FINANCIAL ASSESSMENT:

The total cost of the project is estimated by the U.S. Bureau of Reclamation at \$800,000. The district is requesting a \$100,000 grant from DNRC and a \$700,000 Rehabilitation and Betterment Loan from the Bureau of Reclamation. Construction of the headworks modifications is estimated at \$118,000, while the diversion pipe is estimated at \$507,000. Other costs include a contingency fund of \$105,000 and engineering costs of \$70,000.

The district has limited funds in reserve (\$29,000), and indicates it is barely able to cover operation and maintenance costs. It will, however, provide in-kind secretarial services and communications associated with administering the grant. While the district plans to contract for the pipeline installation, it will accomplish as much construction and supply labor as possible for other portions of the proposed improvements.

#### ENVIRONMENTAL NOTE:

Installation of the jetty in the Sun River will have some negative, but probably short-term, impacts to the river. The jetty installation will reduce or eliminate the need for dozer work in the river that currently occurs annually. In addition, the use of automated gates and regulated water from the river should reduce water use in the district and increase instream flows to benefit fishery, recreation, and other uses. By reducing the amount of seepage from the siphon, additional land will become available for upland bird habitat and agricultural use.

#### RECOMMENDATION:

Fort Shaw Irrigation District submitted two applications for stages of this project. DNRC recommends that a grant in the amount of \$50,000 be issued for this stage of the project; funding of \$50,000 has also been recommended to complete a study, resulting in total project funding of \$100,000. Funding is contingent on DNRC approval of scope of work and budget, on prior completion of that study, and on Fort Shaw Irrigation District receiving the remaining required funding from other sources.



Project No.:

WD-10

APPLICANT NAME:

Town of Dutton, Teton County

PROJECT/ACTIVITY NAME: 500,000-gallon Water Storage Reservoir

AMOUNT REQUESTED:

\$ 91,319

OTHER FUNDING SOURCES AND AMOUNTS: \$ 273,957 - Community Development Block Grant

TOTAL PROJECT COST:

\$ 365,276

PROJECT DESCRIPTION:

Dutton is a small farming community located along Interstate 15 about 34 miles northwest of Great Falls. It has a population of about 400 people. Water storage is quite critical for the town, as its only source of water is a well located six miles away. Numerous breaks have occurred in a mile-long section of the six-mile supply pipeline. The existing storage tank has a usable storage capacity of only about 100,000 gallons. During any supply interruption the current storage tank is not large enough to supply the town until the problem is solved. If a major fire were to occur at the same time the town would be unable respond effectively. The town has drilled several test wells but has been unable to locate any back-up water supply. A DNRC loan was authorized to pay for hook-up to the Tiber project as an alternative source, but this project proved to economically unfeasible.

The town of Dutton requests funds to construct a supplemental 500,000-gallon water storage reservoir. It would be located on a hill southeast of the town at an elevation equal to the current storage tank making it possible for the tanks to work in tandem. Installation of the new tank would require the construction of a 4,000-foot transmission pipeline. A new radio telemetry control and warning system would be installed to operate well pumps and to monitor storage levels. In addition, some re-piping in the existing pump house is proposed for hydraulic efficiency and energy savings.

In addition to having an inadequate capacity, the existing storage tank has required serious on-going maintenance work that makes the purchase of a new tank economical and attractive. The town's primary concerns are adequate fire protection and additional water reserves for other emergencies and peak summer use periods.

TECHNICAL ASSESSMENT:

This proposal supports the applicant's intent to construct a new major water storage reservoir; the town has studied many water supply alternatives in an effort to obtain an adequate and secure supply. These efforts have included the drilling several test wells and preparation of the assessments necessary to support the Tiber project. In fact, the town has been working toward the



resolution of its water supply problems for almost a decade. Currently a consultant is preparing an application to the Community Development Block Grant program. This proposal will provide the specifics to support a competitive application for the necessary additional funding.

As mentioned, the town also has other water system problems. In addition to a water source that is remotely located, a rip-rap project critically needed to secure the well is planned and has been funded through a DNRC grant. All services in the town are metered. This is the best way of monitoring use and controlling consumption.

A copy of the Community Development Block Grant application with additional engineering, technical, and financial information should be submitted for DNRC reference in preparing a grant contract.

FINANCIAL ASSESSMENT:

The estimated cost of the storage reservoir is based on a contractor's cost estimate for an AquaStore tank manufactured by AO Smith. This pre-selection of a tank by a single manufacture and the associated costs are questionable. As a minimum, the type of tank and costs should be checked by a consulting engineer and verified as being in the best interest of the town.

User rates were increased 12 percent in 1987 and 4 percent each year in 1988 and 1989 to cover operation and maintenance costs.

ENVIRONMENTAL NOTE:

The only environmental impacts would be those normally associated with water utility construction.

RECOMMENDATIONS AND CONTINGENCIES:

DNRC recommends a grant not to exceed \$91,319 or 25 percent of the total related project cost contingent on the funding through the Community Development Block Grant program and DNRC's approval of the project's scope and budget.

---

Project No.: WD-11

APPLICANT NAME: Private Applicant

PROJECT/ACTIVITY NAME: Stockett Wastewater Collection & Treatment System

AMOUNT REQUESTED: \$ 100,000 - Grant  
\$ 200,000 - Loan

OTHER FUNDING SOURCES & AMOUNTS: \$ 625,000 - Community Development Block Grant, FmHA, MT Revolving Fund or other sources as yet to be determined.

TOTAL PROJECT COST:

\$ 925,000

PROJECT DESCRIPTION:

This project is to design and construct a new wastewater collection and lagoon treatment system for the unincorporated community of Stockett. The improvements would consist of new gravity sewer service and mains, one small and one main lift station, and a three-cell lagoon treatment system. The selected collection and treatment system would likely have the lowest short-term and long-term costs and greater reliability.

Stockett is located in Cascade County about 15 miles southeast of Great Falls. The area includes 4 businesses and about 95 residences. The estimated population is 250-300 people.

The proposed wastewater system would replace two small community systems and other individual on-site cesspools and septic tank and drainfield systems. Sewage effluent is surfacing in town and some is discharging into Cottonwood Creek. The Water Quality Bureau rates it among the most serious public health and water quality problems in the state. Mr. Peter Frazier, Director of Environmental Health for Cascade County, said it is the highest ranking project in the county.

TECHNICAL ASSESSMENT:

The proposed project will not have any special or unusual features. Two lift stations will be required to supplement a basic gravity collection system.

The alternatives include (1) continuing as-is with reported problems, (2) using pressure sewer lines with grinder or effluent pumps, or (3) collecting effluent in small-diameter sewer lines. No alternatives to a three-cell lagoon system were proposed for consideration.

FINANCIAL ASSESSMENT:

The cost of the proposed system is high relative to the number of users. Therefore, the project will not likely be built without a substantial amount of grant money. DNRC loan and grant funds would be used to pay for \$3,000 in contract administration costs; \$29,000 in salary costs; and \$246,500 in construction; \$15,500 in inflation costs; and \$6,000 in bond administration fees. Combined grant and loan funding is limited to \$200,000 per project.

The applicant states that a precise debt service plan cannot be developed until other funding sources are assembled and the exact amount of the DNRC loan is set. A \$200,000 loan at 10 percent for 20 years would cost each of the 90 user/households \$21.75 per month in addition to current charges. An additional monthly charge of \$6.00 would be assessed to each user/household to pay for administration, operation, and maintenance.

No rate history is available, but the applicant projects that annual fees will be about \$333 for each of the 90 user/households. With a \$200,000 loan at 10 percent, monthly costs would be about \$49.53.

ENVIRONMENTAL NOTE:

Some effluent from the existing sewer systems has surfaced or has entered water courses in the area. An overflow pipe from one drainfield discharges fairly frequently into Cottonwood Creek. The proposed system would eliminate these problems but would require a discharge permit and a waiver from non-degradation law requirements for the lagoon effluent.

The construction would involve normal earth trenching and equipment noise. Trenches in vegetated areas would be re-seeded. In addition, about 1,000 feet of channel would be disturbed in a small unnamed tributary of Cottonwood Creek. The lagoons would have to be located and designed so they would not be damaged by runoff or flooding.

RECOMMENDATIONS:

Since funding under the program is limited to \$200,000 per project, the project is recommended by DNRC for a \$50,000 grant and a \$150,000 loan subject to (1) the applicant forming a public water and sewer district, (2) the applicant securing the balance of project funding from others, and (3) DNRC approval of the scope of work and budget. If grant funding is not available, the applicant may request a DNRC loan of up to \$200,000.

---

Project No.: WD-12

APPLICANT NAME: Private Applicant

PROJECT/ACTIVITY NAME: Fishery Improvement and Sediment Reduction through Conservation and Development of Water Resources

AMOUNT REQUESTED: \$ 54,012

OTHER FUNDING SOURCES AND AMOUNTS: \$ 36,500 - Owner  
\$ 65,588 - USDA  
\$ 59,951 - In-kind services (owner)

TOTAL PROJECT COST: \$ 216,051

PROJECT DESCRIPTION:

The applicant's ranch is located northwest of Missoula in the Nine Mile Creek drainage. This is perhaps one of the most important spawning tributaries to the Clark Fork River. The lower portion of Nine Mile Creek is limited in its value as a spawning fishery because large amounts of sediment are carried by Isaac Creek, a tributary of Nine Mile Creek. These sediment loads result from soil erosion caused by current irrigation practices; also, current irrigation practices cause excess irrigation return flows. Excessive sediment carried by Isaac Creek into Nine Mile Creek has been identified as the major factor limiting trout spawning in the lower Nine Mile Creek.



By storing spring flows in the reservoir and converting to a more efficient irrigation system, the project will decrease soil erosion from the ranch's highly erodible soils and from the lower reaches of Isaac Creek. The project would also conserve energy by employing a gravity irrigation system, eliminating the need to pump from Nine Mile Creek.

The applicant requests grant funds to rehabilitate an existing dam and reservoir on Isaac Creek and to install a gravity sprinkler system to provide irrigation to approximately 200-250 acres of hayland. The Isaac Creek Reservoir will then store approximately 175 acre-feet supplied by Isaac Creek and Rock Creek. Gravity sprinklers will replace existing flow systems which cause severe soil erosion and excess return flow problems. A greater reliance on stored irrigation water will reduce the need to pump water directly from Nine Mile Creek, resulting in an anticipated increased flow in the creek. The applicant estimates that the flow in the creek is 2 cfs.; 100 acres of land are irrigated with water pumped from Nine Mile Creek.

#### TECHNICAL ASSESSMENT:

Isaac Creek is recognized as a carrier of heavy sediment loads to the lower stretch of Nine Mile Creek. This project, with the anticipated benefits of sediment reduction and improvements in fisheries and water quality has the support of the departments of Fish, Wildlife and Parks and Health and Environmental Sciences, Commissioners in Missoula County, and the local conservation district.

The applicant claims that by eliminating the need to pump water for irrigation from Nine Mile Creek, the project would increase flows in the stream by approximately 4.3 acre-feet per day. Although reservoir storage and more efficient water use could increase summer flows in Nine Mile Creek, there are no data to support the 4.3 acre-feet per day figure. The estimate seems high since the reservoir would store only 175 acre-feet, and both Isaac and Rock creeks, streams that would supply the reservoirs and irrigation water, are tributaries to Nine Mile Creek. If approximately 200-250 acres are irrigated, it is not possible to provide for this acreage with a 175 acre-foot reservoir. No hydrologic data are presented regarding irrigation season water yields from Isaac and Rock creeks. The Soil Conservation Service is designing the gravity irrigation system.

The dam on Isaac Creek is rated as a high-hazard dam by DNRC and needs significant rehabilitation to bring it into compliance with state and federal standards. Most of the funding requested will be used for work on the dam and outlet structure. The estimated \$50,000 cost for the dam rehabilitation seems low and is based on one inquiry to an engineering firm. The firm did not visit the project site, and the cost indicated was only a conceivable estimate for sealing a leak in the dam based on drawings. The application indicates that other major work will also be required on the dam and outlet structure.

#### FINANCIAL ASSESSMENT:

The project will be funded by several sources, but the applicant seeks grant funds for 25 percent of the total project cost. Of the \$54,012 grant request, \$40,000 would be for dam repair and \$14,012 for the irrigation system and bank stabilization.



ENVIRONMENTAL NOTE:

Besides improving hay production, a significant portion of this project has been designed to prevent excessive soil and streambank erosion and to allow a greater amount of water to remain as instream flow in Nine Mile Creek. The project should significantly improve lower Nine Mile Creek as a fishery.

Increased storage in Isaac Reservoir may improve wildlife habitat. But irrigation withdrawals could cause extreme fluctuations in water levels, which may adversely affect wildlife.

RECOMMENDATIONS:

This project will directly benefit a private individual; the program limits funding for these purposes to 25 percent of the project cost. A grant of 25 percent of only those costs associated with the dam rehabilitation, up to \$15,000, is recommended contingent on DNRC approval of the project scope of work and budget and on the issuance of a construction permit for dam rehabilitation from DNRC.

---

Project No.: WD-13

APPLICANT NAME: Phillips Conservation District

PROJECT/ACTIVITY NAME: Moisture Monitoring Project

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 6,733 - Phillips Conservation District  
\$ 9,000 - Producers  
\$ 50,666 - Soil Conservation Service

TOTAL PROJECT COST: \$ 166,399

PROJECT DESCRIPTION:

The Phillips Conservation District requests funds to provide producers with accurate information concerning the capabilities and limitations of their climatic region, soil types, and water movement and availability. Producers will use this information to make management decisions for the prudent use of their natural resources to obtain optimum efficiency and production.

A Phase I neutron probe program has been in operation. The current request will fund a three-year project that will continue and expand the neutron probe program and initiate three additional phases. The expanded program will provide producers with detailed information on climate, soil types, and water movement and availability.

A continuation of Phase I would allow soil moisture monitoring with the neutron probe to be continued. The number of access tube sites will be increased from 85 to 125, with a corresponding increase in land-users serviced with an average of four access sites per land-user. The information gained from soil moisture monitoring could encourage land-users to increase water use efficiencies, reduce energy consumption, increase yields, and reduce return flows on irrigated crop and pasture land. Monitoring soil moisture reserves in a dryland crop/fallow cropping system would promote re-cropping and the use of green manure and cover crops on fallow ground.

The second phase would involve an inventory of saline problem areas in the Milk River drainage and a corresponding identification of irrigation management needs. Water samples from irrigation return flows will be used to measure salinity levels. Moderate to severe salt accumulations exist in both the Milk River valley and outlying irrigated stream drainages.

In the third phase, a snow survey telemetry system (SNOTEL) will be established to provide snow, precipitation, wind, soil moisture, soil temperature, and air temperature data.

Phase IV makes the WRAP leaching potential computer program available to producers through the conservation district office. The WRAP program analyzes the potential hazards to water quality resulting from pesticide applications. Site characteristics are compared to pesticide properties to estimate water quality risks.

#### TECHNICAL ASSESSMENT:

The intent of the proposal is good, and would provide producers with valuable information, but the project in present form is too general and lacks a unified purpose or problem. Goals and objectives are not stated clearly, which leaves the project without a focus or organizational framework. There are no apparent connections between the project phases and the plethora of problems to be addressed.

The neutron probe portion of the proposal has demonstrated results with the current probe program, now in its third year. Producers have reported increased yields and reduced energy consumption under sprinkler irrigation by improving the timing of irrigation.

#### FINANCIAL ASSESSMENT:

Total project costs are estimated at \$166,399. Of the grant funds requested, \$22,160 would be used to equip a SNOTEL station; \$26,808 would pay for administrative costs; \$42,718 would pay for salaries; \$3,700 would pay for lab costs, travel, and maintenance; and \$4,614 would be held for inflation.

The budget includes a half-time project administrator in addition to the full-time field technician and half-time research technician. This staff seems excessive. Field and administrative duties could be assumed by 1.5 full-time employees.

ENVIRONMENTAL NOTE:

If recharged areas are re-cropped, environmental impacts of this project would be beneficial if producers increased irrigation efficiency and reduced seep formation.

RECOMMENDATIONS:

A grant of \$53,382 is recommended for this project. To make the project more defined and focused, the third phase (the SNOTEL station) would be omitted. Salaries for the project coordinator would be eliminated and these responsibilities assumed by the other project staff. Funding is contingent on DNRC approval of the project scope of work and budget.

---

Project No.: WD-14

APPLICANT NAME: Montana Bureau of Mines and Geology

PROJECT/ACTIVITY NAME: Hydrogeologic controls on selenium mobility within non-irrigated farm areas in south-central Montana

AMOUNT REQUESTED: \$ 98,778

OTHER FUNDING SOURCES AND AMOUNTS: \$ 31,589 - Montana Bureau of Mines and Geology

TOTAL PROJECT COST: \$ 130,367

PROJECT DESCRIPTION:

This two-year project will identify land-use practices that affect the mobility of selenium and the hydrologic controls associated with the mobility of selenium in the soil. In the semi-arid Great Plains of Canada and the United States, saline seep has claimed 2 million acres of crop land. The extent of saline seep continues to increase at a rate of 10 percent per year, and with it the concentration of selenium in seep areas. Trace metals (particularly selenium) have been found in many surface and groundwater samples, and a number of livestock, wildlife, and fish kills are believed to be directly related to selenium concentrations in sink areas.

While there seems to be a connection between the mechanics of saline seep formation and the movement and concentration of selenium in seeps, there isn't enough data to confirm the connection. The project will concentrate on selenium sources, transport of both dissolved and particulate selenium, and selenium sinks. The objectives of this study include evaluating selenium loading in lakes (sinks); determining whether the redox state, a chemical species of selenium, limits mobility; determining whether vegetative uptake can be detected in soil water or groundwater selenium concentrations; and measuring the percentage of selenium flux (movement) delivered to the lake. Monitoring sites will be placed in cropped, fallow, and sod lands. Monitoring will include



airborne particulate and water quality sampling through and below the root zone to determine general large-scale groundwater movement. Samples will be collected three times a year.

#### TECHNICAL ASSESSMENT:

Selenium is highly toxic to mammals, and saline seeps containing high levels of selenium have been detected in several areas of Montana, with the potential to significantly reduce water quality for human and livestock consumption and wildlife habitat. The selenium issue currently receives too little attention.

The project is designed to monitor groundwater and vegetative samples taken from a site in the Wheat Basin in Stillwater County. Twenty to 50 observation wells will be used to gather samples for analysis for major ions and trace metals. The project is located within a 10-year demonstration site for saline-seep reclamation techniques, undertaken by the U.S. Soil Conservation Service and Stillwater Conservation District.

#### FINANCIAL ASSESSMENT:

The project budget identifies \$49,344 for personnel, which includes a hydrogeologist, agricultural specialist, environmental engineer, and driller. Associated costs will require an additional \$49,434 to cover drilling equipment rental, laboratory activities, travel, and well casing and other expenses.

#### ENVIRONMENTAL NOTE:

If successful, this study could lead to improved land management practices and a corresponding improvement in water quality and enhancement of wildlife habitat.

#### RECOMMENDATIONS:

DNRC recommends a grant of \$98,778 contingent on approval of the project scope of work and budget.

---

Project No.: WD-15

APPLICANT NAME: Granite Conservation District

PROJECT/ACTIVITY NAME: Demonstration Ice Block

AMOUNT REQUESTED: \$ 99,979

OTHER FUNDING SOURCES AND AMOUNTS:

\$ 7,500	- Soil Conservation Service
\$ 12,480	- Montana State University
\$ 20,180	- Montana Bureau of Mines and Geology
\$ 2,000	- RC&D
\$ 15,791	- Undetermined



TOTAL PROJECT COST:

\$ 157,930

PROJECT DESCRIPTION:

Storing runoff water behind earthen or concrete dams has been the traditional method of water storage used in Montana. Now, hampered by high costs, limited dam-site locations, long-term maintenance, possible failures during flooding, and potential irreversible impacts on water quality, sedimentation, bank stabilization, and loss of land both beneath the reservoirs and downstream, dam storage alternatives might be attractive.

The applicant requests funds to conduct a two-year study of the feasibility of storing water in the form of ice. This approach would eliminate the need for a dam and would be a reversible commitment of land. One or two small blocks of ice will be created and monitored to determine the melt characteristics as a function of the block size and shape and ambient climate conditions. This information will be used to predict whether or not there is a potential for ice blocks to augment water supplies in Montana.

Water will be diverted from Douglas Creek at a rate of 20 to 40 gpm for construction of one or two ice blocks containing 10 to 20 acre-feet of water. Water will be withdrawn from the stream during winter months after freeze-up, and diverted to the block site using a gravity flow pipeline with sufficient velocity to prevent pipeline freeze-up. Preparation of the one and one-half acre site includes a collection ditch to be dug around the site, a flow measuring device installed on the return flow, shaping and removal of vegetation, and preparation of a frozen-soil base. Part of the proposed ice block will be covered with a layer of light colored straw to serve as both insulation and a reflective surface. Melt rates from the covered and uncovered portions of the block will be compared. The method of applying water to create the ice block has not yet been determined.

In addition to melt water flow measurement, continuously recording thermometers and anemometers will record temperature and wind direction and velocity. Soil moisture conditions within and adjacent to the site will be monitored and evaluated, as will the amount of water diverted, ice accumulation, runoff, and evaporation.

The Granite Conservation District will be responsible for grant administration; a graduate student will perform much of the work associated with the study. The project will be the subject of his or her masters thesis.

TECHNICAL ASSESSMENT:

An interesting water storage concept with broad public appeal, the project has already received local and national press coverage. It is proposed that the data collected from this demonstration will be used to develop a model of melt rates as a function of temperature and winds. The model would then be used to predict the feasibility of larger ice blocks for water storage.

Permission to use a water right for the study has been obtained; formal change proceedings for the new purpose, place, and period of use will have to occur before diverting water for storage. The project schedule indicates that data analysis will be performed after the second year; preliminary data analysis

and observations should be made during and after the first year. Since this is a two-year project, any necessary adjustments to the approach must be identified early in the project's first year. Project performance should be shared with cooperators during this early stage of the project and throughout the project term. Other details also need to be resolved in the research plan before implementation. For example, the proposal includes a discussion of data collection and instrumentation needed to develop a model of melt rates and to monitor aspects of water quality. The proposal neglects other elements of the process that deserve evaluation. A mass balance water budget analysis to determine seepage, runoff and evaporation, and sublimation should be addressed in the research plan. The important components are the amount of water diverted from the stream, the amount of melt water returned to the stream, and all the interim losses.

Details concerning various aspects of the study also need to be included in the research plan. Soil moisture conditions within and adjacent to the site will be monitored and evaluated, but the application does not discuss the monitoring equipment needed, the frequency of data collection, or the cost of conducting this portion of the study. Furthermore, the purpose of soil moisture monitoring and evaluation is not defined. Also according to the proposal, stream temperatures are to be monitored and if significant changes occur, steps will be taken to mitigate the impact. The research plan should address how and how often such monitoring will occur, and at what cost, and should define "significant changes".

The Department of Fish, Wildlife and Parks has some concerns about changes in water temperature. If return flows lower the temperature of Douglas Creek, a population of unique westslope cutthroat trout may be negatively affected. These lower temperatures may alter the aquatic habitat, delay spawning, and reduce rates of growth. For comparison, one year's temperature data for Douglas Creek should be collected prior to project construction. The applicant feels the Department of Fish, Wildlife and Parks should collect the water quality and temperature data because of the unique nature of the trout population, and the limited project budget. These concerns need to be resolved before the project begins.

The proposed study will involve covering part of the ice block(s) with light colored straw for insulation. Melt rates from insulated and uninsulated portions of the block are to be compared. However, details of the comparison are not discussed. Will the comparison be quantitative or qualitative and will variables that influence melt rates be measured? The Department of Fish, Wildlife and Parks is also concerned about the straw insulation/reflective debris being carried into the creek with the melt-water runoff. Again, these details should be developed and included in the research plan.

Finally, during site preparation, the ground may be shaped and vegetation removed. Since one of the anticipated advantages of ice block water storage is the reversible commitment of land, site rehabilitation and long-term monitoring to ensure that site impacts are mitigated should be included in the project. Also, because soil erosion rates and slumping could be high due to waterlogged soils with a frozen ice core, these should be closely monitored both during melt and late summer and fall rain storms.

#### FINANCIAL ASSESSMENT:

The total project cost is \$157,930; of that amount \$15,951 has not been secured. Grant funds of \$99,979 would be used to pay \$5,000 in administrative costs; \$64,691 for professional costs; \$16,138 for lab costs, travel, printing, supplies, equipment, drilling, and report preparation; and \$14,150 for labor, materials, and site preparation.

Time commitments and therefore salary costs appear high; no explanation supporting the time required to accomplish the proposed research was provided. Other costs appear reasonable or underestimated since many aspects of the planned monitoring and data collection were not fully defined in the project proposal. Total salaries of \$48,910 over a two-year period would be the equivalent of 30 hours a week at \$15.68 per hour. The nature of this project would not require such a commitment; 20 months of a half-time (20 hours a week) position paid at an average rate of \$15.00/hour would seem more reasonable.

#### ENVIRONMENTAL NOTE:

If successful, this project will demonstrate a viable alternative to conventional off-stream water storage. Project installation will have temporary adverse environmental impacts due to land disturbances in a limited area. The project may impact stream temperatures.

#### RECOMMENDATIONS:

A grant of \$67,787, reduced to reflect reasonable commitment of research time over a two-year period, is recommended contingent on DNRC approval of the project scope of work and budget. The project scope will have to clearly address all aspects of the research proposed, the methods to be used, data gathered, and associated costs. Timelines may need to be adjusted to allow time for change proceedings for water rights to occur and data on pre-project stream temperatures to be gathered.

---

Project No.: WD-16

APPLICANT NAME: Private Applicant

PROJECT/ACTIVITY NAME: Cherry Creek Flood Control - Water Conservation

AMOUNT REQUESTED: \$ 41,714

OTHER FUNDING SOURCES & AMOUNTS: \$ 103,831 - Applicant (includes \$94,380 in-kind)  
\$ 14,310 - Bank loan  
\$ 7,000 - ASCS Agricultural Conservation Program

TOTAL PROJECT COST: \$ 166,855



### PROJECT DESCRIPTION:

A private applicant from Glasgow requests grant funds to construct a water spreading irrigation and flood control system on Cherry Creek, approximately 8 miles north of Glasgow. Four gabian diversion structures, each diverting water to a set of water spreading dikes along a two-mile stretch of Cherry Creek, will be constructed to divert high flows from the creek to lessen damage downstream during flooding periods. The diversion structures and dikes will most consistently be used to spread water and increase production on approximately 150 acres of hay and pasture land adjacent to the creek.

The applicant reports that Cherry Creek has flooded in past years causing damage to property downstream from the proposed projects. Future flooding is indicated and could cause private property damage, public road damage, and water well contamination.

### TECHNICAL ASSESSMENT:

The Soil Conservation Service conducted a preliminary survey of the proposed project areas and has completed a preliminary design. The Soil Conservation Service claims all four diversion structures could be constructed in proposed locations but, specific design information is provided for only one of the sites. A portion of one of the proposed sites (approximately 12 acres) is owned by the U.S. Bureau of Land Management. Permission will be required before any work is initiated.

Documentation for the designed site indicates a gabian structure will divert water to a channel which will lead to a set of water spreading dikes. The dikes will be designed to hold two feet of water. The project is scheduled to be constructed over a three- to four-year period.

The Soil Conservation Service indicated other alternatives were also considered. These were side roll sprinkler irrigation, flood irrigation, and a "do nothing" option. The proposed project was chosen to best put future flood waters to beneficial use thus preventing erosion and property damage downstream.

No past or future estimates of potential flood damage costs, zone delineations, or flow rates are given. The technical information focuses on water spreading. No discussion is provided to explain how or to what extent the proposed structures will provide control during flood periods; presumably, if designed and installed correctly, the diversion structures should have a positive impact.

### FINANCIAL ASSESSMENT:

The budget is poorly developed. The total project cost of \$166,855 was based on an erroneous gabian diversion structure cost estimate of \$504 per acre; that cost should have been \$50.40. Using Soil Conservation Service information, the corrected total cost per acre--including the \$50.40 per acre gabian structure cost--is \$500.40 instead of \$954. Costs include the estimated cost for installed diversion structures and water spreading dikes. The corrected total project cost is \$87,520 which includes 10 percent construction contingency and 6 percent inflation contingency.



The proposal requests grant funds to pay for \$41,714 of labor costs; 25 percent of the total estimated project cost. The applicant offers to contribute \$103,831; \$94,386 for labor and \$9,445 for contingency costs. A \$14,310 bank loan will pay for additional contingencies and \$7,000 from the Agricultural Stabilization and Conservation Service will pay \$3,500 for structure acquisition and \$3,500 for materials. The applicant indicates he will also purchase equipment for the project, but no respective costs are included in the budget.

ENVIRONMENTAL NOTE:

Short-term adverse impacts to the environment may occur due to disturbance of the soil and vegetation during construction of the project. Long-term impacts should be positive; reduced soil erosion, reduced sediment load in Cherry Creek, and improvements to wildlife habitat are examples of anticipated benefits.

RECOMMENDATIONS:

This project will provide benefits directly to a private individual; the program limits funding for these purposes to 25 percent of the revised project cost. A grant of 25 percent of the project cost up to \$21,880 is recommended contingent on (1) the determination by DNRC of the applicant's ability to finance the remaining cost of the project, (2) the applicant obtaining all the proper permits, and (3) DNRC approval of the scope of work and budget.

---

Project No.: WD-17

APPLICANT NAME: Private Applicant

PROJECT/ACTIVITY NAME: River Road Stabilization

AMOUNT REQUESTED: \$ 34,450

OTHER FUNDING SOURCES AND AMOUNTS: \$ 103,350 - source(s) unknown at this time

TOTAL PROJECT COST: \$ 137,800

PROJECT DESCRIPTION:

The applicant requests funds to slope and rip-rap a 1,400-foot section of the Yellowstone River riverbank at its confluence with the Clarks Fork Yellowstone River, south of Laurel, Montana. Project objectives are to stabilize the riverbank and save bordering residential and agricultural property from further erosion, reduce the resulting sedimentation, and improve riparian, fish, and wildlife habitat along this section of riverbank.

The 8-foot high bank will be sloped and armored with 18-inch diameter sandstone rip-rap. Approximately 3,500 cubic yards of rock will provide 2 feet of coverage, with a 3-foot deep key at the toe.

#### TECHNICAL ASSESSMENT:

The applicant has tried alternative methods such as jetties and cabled trees without success. Because of extreme water velocities at the site, large rock rip-rap or drop structures may be the only viable options. Drop structures could pose a navigation hazard for recreational floating, which would eliminate this option. Concern was expressed that a rock rip-rap structure may not dissipate the erosive energy, but simply displace it, possibly causing erosion downstream. Whether it will be an improvement for riparian, fish, or wildlife habitat or aesthetics is difficult to judge. Another concern is the insufficient geomorphic, hydrologic, and hydraulic information needed to properly evaluate the adequacy of the design. Given the hydraulic forces involved and the stresses exerted by river ice, there is a significant chance that the project would fail during peak-flows if some other factor, such as ice, debris-jams, diverted the principal current to a new location unprotected by the project. At the very least, it is likely that long-term annual maintenance will be required, which would probably add at least 10 to 20 percent to the project cost.

The Soil Conservation Service would require one to three years to schedule the project design through the regional engineering office, and only after authorization at the national level. There is some question whether the Soil Conservation Service has design authority for a stabilization project of this size.

#### FINANCIAL ASSESSMENT:

Project cost estimates supplied by the Soil Conservation Service are based on a similar up-stream project built in 1976. The addition of a "bio-technical" design approach that incorporates streambank vegetation as a key component, annual maintenance, and the complex hydraulic forces involved could increase project costs beyond the estimated \$137,800.

#### ENVIRONMENTAL NOTE:

If successful, this project would stabilize the affected river bank and improve water quality. Downstream impacts are unknown.

#### RECOMMENDATIONS:

DNRC feels that more study is needed but cannot fund a project from feasibility level study through design and construction. DNRC recommends a grant of 25 percent of the cost of a hydrologic study/engineered design, not to exceed \$5,000. The grant is contingent on DNRC approval of the scope of work and budget and the applicant securing the remainder of funding.

---

Project No.: WD-18

APPLICANT NAME: Private Applicant

PROJECT/ACTIVITY NAME: Sun River Water System

AMOUNT REQUESTED: \$ 100,000 - Grant  
\$ 200,000 - Loan

OTHER FUNDING SOURCES & AMOUNTS: \$ 821,000 - Community Development Block Grant, FmHA, MT Revolving Fund, or other funding source yet to be determined.

TOTAL PROJECT COST: \$1,121,000

PROJECT DESCRIPTION:

Funds will be used to develop two or three springs, a 100,000-gallon capacity water storage reservoir, and a distribution system for the community of Sun River and outlying housing.

Sun River is located in Cascade County about 20 miles west of Great Falls on Highway 200. There are about 50 residences in Sun River and 20 additional ones in the area to be served. They currently use individual on-site wells.

TECHNICAL ASSESSMENT:

Under this project, water users will switch from individual wells to a central water system with some improvement in water quality. The proposed system should also have greater reliability with the development of multiple sources and a storage reservoir. Although not specified by the applicant, much greater fire protection should also be achieved.

Although some preliminary and planning engineering work has been done, several technical issues need to be resolved. For example, two or three springs or shallow water groundwater areas are to be developed as new sources of supply; whether these will be adequate in dry years has not been assessed. They might be more subject to contamination by irrigation drainage water, fertilizers, herbicides, or pesticides than wells. Whether a deep well might be cheaper and better should be considered. And, since some 50,000 feet of pipeline will be needed to provide service to the 20 rural residences, whether piping water through almost 10 miles of pipe is the best and most economical approach should be determined.

The preliminary hydraulic analysis indicates that water will be pumped up to the rural area and then run through a pressure reducing station for the main town. This would not be energy efficient.



#### FINANCIAL ASSESSMENT:

The total project cost is estimated in the proposal at \$1,121,000. This would serve only 70 existing residences. The average cost would be over \$15,000 per residence. Even with supplemental grant money, it is doubtful that the users would be willing to pay the high cost to switch from their existing individual well and pump systems. User charges of \$33.00 per month would be applied for about 25 percent of total costs.

DNRC grant and loan funds are requested to pay for \$2,600 in grant administration costs; \$27,300 in professional salaries or consultants and related costs; \$225,000 for construction costs; \$13,900 for inflation; and \$31,200 for bond administration. Combined grant and loan funding under the program is limited to \$200,000 per project. Therefore the project could not be funded to the degree the applicant desires.

#### ENVIRONMENTAL NOTE:

The only significant environmental impact would be that associated with normal utility construction.

#### RECOMMENDATIONS:

DNRC recommends no funding for this project. The application lacks documentation of existing water and sewer problems. More information is needed to determine whether the project will actually ensure the needed quality and quantity of water from the spring sources. The applicant also needs to re-evaluate the potential for agricultural pesticide or herbicide contamination.

---

Project No.:

WD-19

APPLICANT NAME:

Private Applicant

PROJECT/ACTIVITY NAME: Crow Creek Ditch Lining

AMOUNT REQUESTED:

\$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS:

\$ 201,920 - Applicant (cash & contribution)  
\$ 120,000 - ASCS (USDA) Grant, Possible loan from U.S. Bureau of Reclamation

TOTAL PROJECT COST:

\$ 421,920

#### PROJECT DESCRIPTION:

Funds are requested to construct and install concrete lining in a main irrigation ditch that will replace several unlined ditches in Broadwater County. The new ditch will result in reduced seepage losses from the existing unlined ditches. The water saved, 60 percent of that currently diverted, will be left



in the stream for fishery and wildlife habitat improvement or for diversion by other irrigators. The existing ditches will be filled and reclaimed in the cultivated areas. In the range areas, they will be left as is.

The new system of lined ditches will include a 44,117-foot main ditch with a flow capacity of 35 cfs; a secondary ditch of 14,484 feet and 25 cfs flow capacity; and a 18,321-foot, 15 cfs lateral ditch. Some new structures, weirs, headgates, flood gates, pivot bridges, and culverts will also be required. Those existing will be re-used when possible.

No new land will be irrigated. Approximately 2,250 acres of sprinkler irrigation and 675 acres of flood irrigation are served by the existing system.

#### TECHNICAL ASSESSMENT:

The applicant claims water will be conserved by consolidating several unlined irrigation supply ditches into the main concrete lined supply ditch, secondary, and lateral ditches. Existing unlined ditches lose an estimated 60 percent--nearly 48 cfs--of the decreed water.

Installing pipelines or drilling wells close to the irrigated fields have been mentioned as possible alternatives. Covered plastic membrane liner has not been considered, although this approach would probably be cheaper. Before a final approach is selected, pre-engineering should be done to properly analyze alternatives and to better define costs, scope of work, and other technical aspects.

The SCS has concerns regarding who will do the design and construction supervision, the lack of an operation and maintenance plan, return water and field drainage disposal, and landowner roles in coordinating and completing the work proposed.

The ditch excavation and earthwork will be one of the most expensive aspects. After the ditch is prepared, a power ditcher is proposed to do the final shaping of the ditch followed by the slip form for laying the concrete liner. The applicant plans to do most of the earthwork; individual's costs will be applied to their share of the total project cost.

It should be noted that some landowners have already switched to pumping water from wells for sprinkler systems.

#### FINANCIAL ASSESSMENT:

The economic feasibility of this project is difficult to assess. Reportedly, the benefits of water conservation will go toward instream flow for fish and wildlife and to all the water users on Crow Creek. Also, much of the work is to be done on a cost-credit basis by the applicant.

The estimated costs appear very low and the applicant will have trouble completing the project on budget. The cost of work to be done and materials to be furnished by the applicant should be determined and included in a project plan budget.

Proposed funding includes a \$100,000 DNRC grant; a \$120,000 ASCS grant; engineering and surveying contributed by the SCS; and applicant-contributed labor, equipment, materials; and an unspecified amount of cash. The applicant will be asking the ASCS to establish a pooling agreement to obtain cost sharing from that agency. ASCS does not expect to have the funds necessary to make a commitment in 1991 at the level proposed.

DNRC funds would be used to pay for construction costs.

ENVIRONMENTAL NOTE:

Consolidation and loss of water from several unlined ditches will result in water conservation with long-term benefits. Higher instream flows and an increased supply of irrigation water will be available. A lined ditch will also have some secondary benefits to help control weeds, reduce erosion, and probably reduce saline areas caused by seepage.

The actual construction will cause some land disturbance that will be mitigated by re-seeding disturbed areas and filling and reclaiming ditches in irrigable areas.

The overall benefits should be positive and the negative short-term impacts should not be very significant.

RECOMMENDATIONS:

DNRC recommends no funding. The applicant should develop the project. Preliminary engineering with full evaluation of alternative linings and other possible solutions should be done. Present and expected water delivery and savings, associated costs (including operation and maintenance), and possible funding should be analyzed. This information, presented in a report, would provide a basis for project funding in the future.

## CHAPTER II

### THE WATER DEVELOPMENT PROGRAM - LOANS GREATER THAN \$200,000 COAL SEVERANCE TAX BONDS

#### A. Program Description and History

In 1981, the legislature adopted SB 409, which provided for the issuance of up to \$250 million in Montana coal severance tax bonds "for financing specific water resource development projects and activities in the state authorized by the legislature." Public and privately owned projects are eligible. Statute dictates that loans from coal severance tax bond proceeds are to be administered by DNRC, and that each project is to be reviewed to determine its technical and financial feasibility.

The constitutionality of the state's bonding authority under this program was initially challenged. In February 1984, the Montana Supreme Court in Grossman vs. State of Montana ruled in the state's favor. The first Montana Coal Severance Tax Bond, a \$10,485,000 issue, was sold in August 1984. The 20-year bond was sold for 10.26 percent.

In September 1985, a \$16,865,000 bond was sold at an interest rate of 9.29 percent. This issue refunded the September 1984 bond and provided an additional \$6 million at a savings of \$50,000 to the state. In December 1985, an \$11,500,000 bond was sold at a variable interest rate. That lower variable rate offset interest subsidy costs and provided a substantial savings to the coal severance tax trust fund.

A \$1,215,000 bond was sold in December 1987 at a fixed rate of 7.32 percent for a term of 20 years to finance projects. Also in 1987, a \$22,200,000 bond was sold at a variable rate to finance the tax exempt portion of constructing hydropower on the state-owned Toston Dam, and a \$3,150,000 bond was sold to finance the taxable portion of the Toston Dam hydropower project.

In 1989, a \$6,000,000 coal severance tax bond issue was sold to fund eight public water projects. The bond interest rate was 6.87 percent. In 1990, a \$9,600,000 refunding bond was sold to fix the interest on the variable rate bond sold in 1985. This action reduced interest rates on existing water development loans for 28 public entities.

#### B. Interest Rates and Bond Repayment

The interest rate schedule on loans to public and private entities made from coal severance tax bond proceeds is established by the legislature. The schedule provides loans at a rate less than the rate at which the state bond is sold.

The 1985 Legislature requested that DNRC recommend a methodology for giving differential interest rates to the projects recommended for loans. A method has been derived that considers the user rate as a percentage of "the median family

income" on municipal projects. The 1987 Legislature further modified this method by considering the user rate as a percentage of the "median household income" on municipal projects.

Using the current method, if less than 1 percent of the median household income is used to pay user rates, then no subsidy is recommended. If the user rate is at least 1 percent but less than 2 percent, then a 1 percent interest rate subsidy for five years is recommended. If the user rate is at least 2 percent, but less than 4 percent, then a 2 percent interest rate subsidy for five years is recommended. And, if the user rate is greater than 4 percent of the median household income, then a 3 percent interest rate subsidy for five years is recommended.

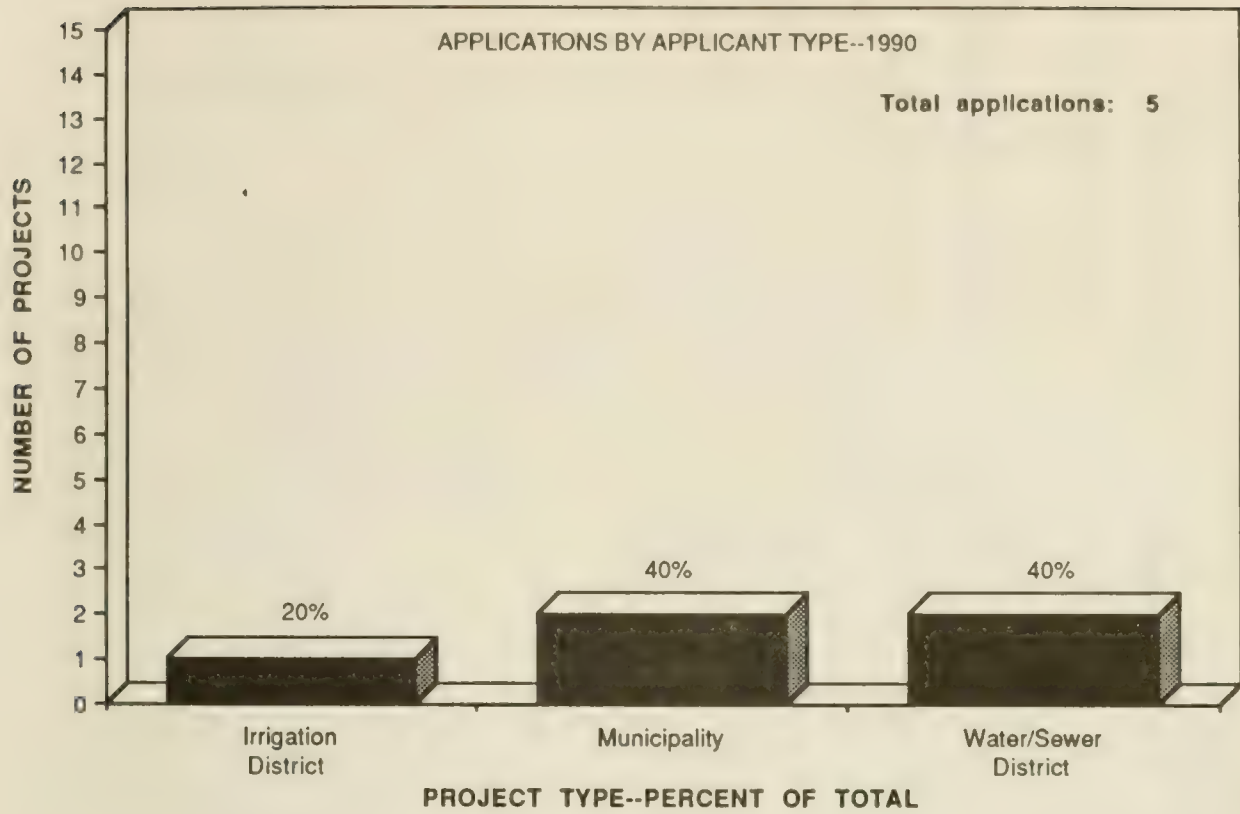
Coal severance tax revenues are used to pay the difference between the interest paid by loan recipients and the finance cost of the bond. Therefore, coal severance tax bonds are paid with revenues from the water development projects financed by the bond proceeds and from coal severance tax proceeds. To implement these repayment provisions, the statute established a fund structure within the permanent coal tax trust fund. A coal severance tax bond fund was established to which coal tax revenues are first credited when collected. Transfers are then made to the coal severance tax permanent trust fund except for the amount necessary to meet the coal severance tax bond principal and the interest payable on the next two semi-annual payment dates. In this way the project revenues and monies in the coal severance tax bond fund secure these bonds.

### **C. 1990 Loan Applications**

Figures 2.1 and 2.2 give a breakdown by applicant and project type of the six Coal Severance Tax Loan applications submitted to DNRC. Table 2 lists the Coal Severance Tax Loan applications received in 1990 and the loan recommendations made by DNRC. Detailed project summaries follow Table 2.



**FIGURE 2.1  
COAL SEVERANCE TAX LOAN PROGRAM**



**FIGURE 2.2  
COAL SEVERANCE TAX LOAN PROGRAM**

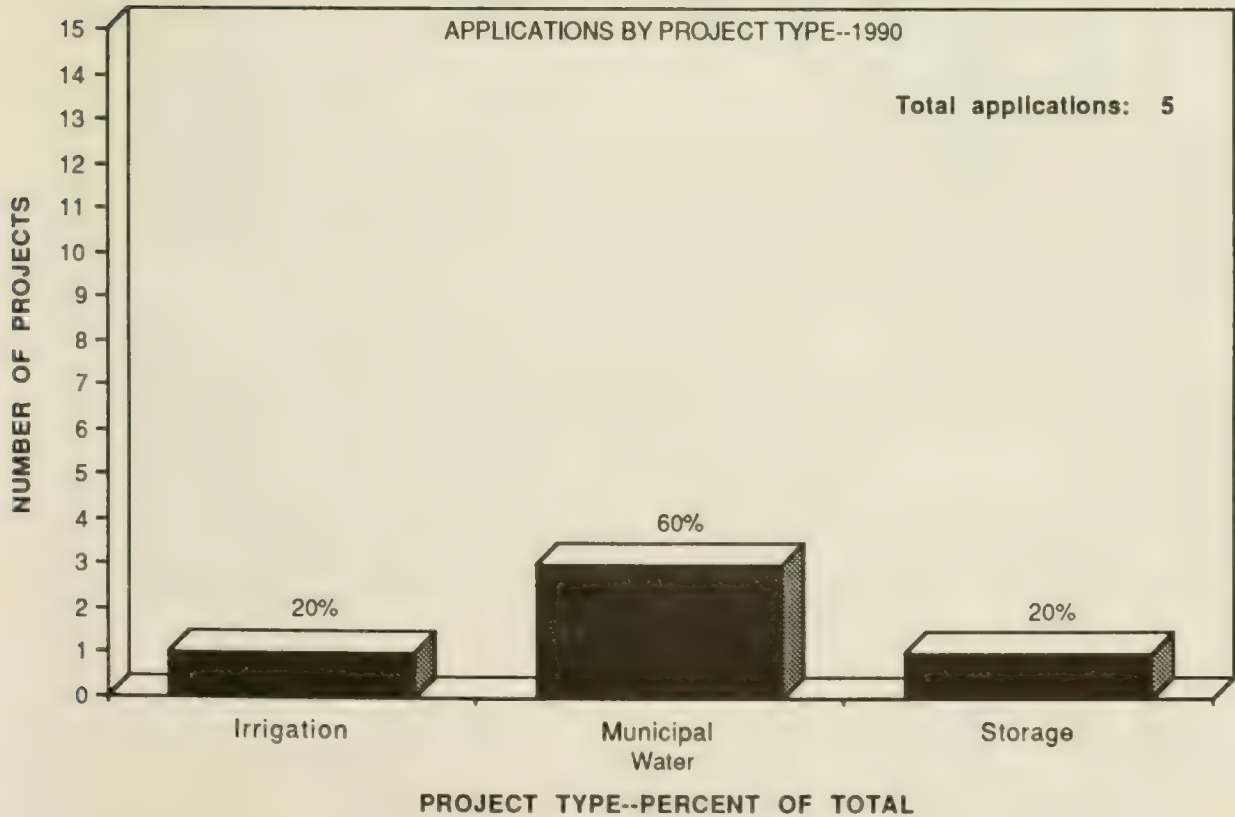


TABLE 2

WATER DEVELOPMENT PROGRAM  
COAL SEVERANCE TAX LOANS

<u>Applicant Name</u>	<u>Project Name</u>	<u>Loan Recommended</u>	<u>Interest Rate and Term</u>
City of Columbia Falls	Water Improvements	1,623,720	1% below bond rate for 5 years and at bond rate for 15 years.
City of Forsyth	Water Treatment Plant Improvements	1,948,916	2% below bond rate for 5 years and at bond rate for 15 years.
Huntley Irrigation District	Rehab and Reconstruction of Diversion Structure and Main Canal	747,808	At bond rate for 20 years.
Beaverhead County, Red Rock River Water and/or Sewer District	Lima Dam Rehabilitation	3,040,000	At zero interest for 30 years.
Seeley Lake - Missoula County Water District	Water Treatment Plant	922,150	2% below bond rate for 5 years and at bond rate for 15 years.

Project No.: PL-1

APPLICANT'S NAME: City of Columbia Falls

PROJECT/ACTIVITY NAME: Water Improvements

AMOUNT REQUESTED: \$1,163,720 - DNRC Loan

OTHER FUNDING SOURCES & AMOUNTS: None

TOTAL PROJECT COSTS: \$1,163,720

PROJECT DESCRIPTION:

The existing water system for the City of Columbia Falls consists of a surface water source plus one well. The surface water supply is fed from an open reservoir and does not receive any filtration. Chlorination is the only treatment provided. The well is used during peak consumption periods and as an emergency supply. The existing unfiltered surface supply poses a serious potential health risk to all of its users. As recommended by Morrison-Maierle, Inc., and Thomas, Dean and Hoskins, Inc. in the Master Plan Studies, the city plans to abandon the surface water system and replace it with a new well, which would augment the supply from the existing well. A new storage tank will replace the abandoned supply reservoir. These improvements are part of the Phase II Water System Master Plan upgrades for the entire Columbia Falls water treatment and distribution systems.

TECHNICAL ASSESSMENT:

Several treatment alternatives were evaluated in the Phase I study, including conventional rapid filtration, direct filtration, diatomaceous earth filtration, slow sand filtration, and ozonation. Based on initial costs and O&M costs, the consulting engineers suggested that a new well and storage tank alternative would be more cost effective than building and operating a treatment plant.

Test wells should be drilled to confirm aquifer geology and establish well potential prior to final design. This new well will be viable only if the test wells show that acceptable water quality and quantity can be maintained over the long term for a full-scale production well.

Storage must supplement the supply during the peak demand periods and provide sufficient water for a major fire. An on-ground 2 MG steel storage tank is proposed and appears adequate for projected future water requirements.

FINANCIAL ASSESSMENT:

The estimated cost of the proposed project, presented in the April 1990 "Water System Master Plan Draft Report," includes professional and technical services (\$135,950), construction (\$906,540), contingency (\$88,595), and bond administration (\$32,635). The total is \$1,163,720.

The funds requested for the scope of the work outlined are in line with current similar construction projects.

The city intends to issue water revenue bonds to repay the requested DNRC loan. The existing average user rate is \$12.93 per month. The average rate would increase by \$12.89 (assuming a 10 percent interest rate) per month to \$25.82 per user to repay the DNRC water improvements loan. One revenue bond for sewer treatment facilities totalling \$510,000 is outstanding.

According to the "Montana Community Development Block Grant Program 1990 Application Guidelines for Housing & Facilities Projects," the median household income for the City of Columbia Falls is \$16,960.

ENVIRONMENTAL NOTE:

Other than the short-term impacts typically associated with municipal construction projects, no adverse environmental impacts are anticipated with this project.

The positive impacts that will result are an improved water quality that will meet state and federal safe drinking water standards.

RECOMMENDATIONS & CONTINGENCIES:

DNRC recommends a \$1,163,720 loan. The interest rate shall be one percentage point below the rate at which the state bond is sold for the first 5 years, and at the non-reduced bond rate for the following 15 years. Any reduction in the loan request will result in a recalculation of the loan interest rate.

Project No.

PL-2

APPLICANT'S NAME:

City of Forsyth

PROJECT/ACTIVITY NAME:

Forsyth Water Treatment Plant Improvements

AMOUNT REQUESTED:

\$1,948,916 - DNRC loan

OTHER FUNDING SOURCES & AMOUNTS:

None

TOTAL PROJECT COSTS:

\$1,948,916



#### PROJECT DESCRIPTION:

The existing Forsyth water treatment facility, constructed in 1931, is a conventional water treatment system. The system collects precipitates and sediments and filters and disinfects water from the Yellowstone River. Major plant upgrades and improvements were made in 1949, 1962, 1976, and 1989.

The 1989 "Master Plan for Water Treatment Plant Improvements for the City of Forsyth" by HKM Associates identified 13 major deficiencies in the plant, based on a comparison of component characteristics with the 10 state standards. Recommended improvements range from upgrading the intake structure, sludge collection system, and chemical feeders to installing new pumps and a new pump house. In addition to the deficiencies indicated, corrosion is noted as a major problem throughout the water treatment plant.

Due to financial constraints, the City of Forsyth intends to make improvements over a period of 3-4 years with the improvement priorities based on the following factors: violation of state regulations; reliability of existing components; hydraulic capacity of existing components; and operational flexibility.

The city council has made a commitment to improve the water quality and ensure that the water treatment plant remains reliable for the citizens of Forsyth.

#### TECHNICAL ASSESSMENT:

The city's master plan presents the evaluation of the existing Forsyth water treatment plant. The master plan contains recommendations to upgrade the treatment plant to meet both the future quantity requirements of the city and the water quality standards set by the EPA's public health and safety regulations. Many of the proposed improvements were also identified in a Comprehensive Performance Evaluation of the water treatment plant. The Comprehensive Performance Evaluation was conducted in 1988 by the Department of Health and Environmental Sciences and a contracted consultant.

Several possible alternatives to correct component deficiencies were evaluated and final recommendations and costs, based on equipment quotes, previous construction experiences, and estimation directories, were presented in the final master plan. They appear to be realistic and complete.

The plant upgrade and modification scheduling appears to be consistent with both the requirement of the regulatory agencies and the city's financial obligations.

#### FINANCIAL ASSESSMENT:

The project cost, presented in the master plan, includes contract administration (\$24,300), professional and technical services (\$270,531), construction (\$1,502,952), inflation contingency (\$97,200), and bond administration (\$53,933). These costs total \$1,948,916.

A Community Development Block Grant was reviewed and identified as not being a possibility for the city.

The city intends to issue revenue bonds to repay the requested DNRC loan. The existing average user rate is \$21.31 per month. This rate would increase by \$18.23 per month to \$39.54 to repay the requested DNRC loan assuming a 10 percent interest rate for the DNRC loan and a 20-year repayment term. Median household income for the City of Forsyth is \$17,767 according to the "Montana Community Development Block Grant 1990 Application Guidelines for Housing and Facilities Projects."

The city currently has two outstanding bond issues, both held by Farmers Home Administration. The first is a sewer and water bond, the second is a sewer bond. The outstanding balance on these issues total \$649,659 as of September 30, 1990.

ENVIRONMENTAL NOTE:

Upgrading the water treatment plant will provide Forsyth residents with an adequate supply of quality water for the future.

This project should have no negative impacts on area water quantity or quality, soils, vegetation, wildlife, or other natural resources other than those minor short-term effects typically associated with construction projects.

Positive impacts will include an improved water quality that will meet state and federal safe drinking water standards.

RECOMMENDATIONS & CONTINGENCIES:

DNRC recommends a \$1,948,916 loan to be repaid over a maximum of 20 years. The interest rate shall be two percentage points below the rate at which the state bond is sold for the first 5 years, and at the bond rate for the following 15 years. Any reduction in the loan request will result in a recalculation of the loan interest rate.

If the user water rates required to repay the DNRC loan increase by \$25.00 per month or more, as expected, the city shall conduct a debt election. This election will be in accordance with Title 7, Chapter 7, Part 42, MCA so that the revenue bonds are backed by the city's general obligation.

---

Project No.: PL-3

APPLICANT NAME: Huntley Project Irrigation District

PROJECT/ACTIVITY NAME: Rehabilitation and Reconstruction of the Diversion Structure and the Main Canal

AMOUNT REQUESTED: \$727,958 - DNRC loan

OTHER FUNDING SOURCES: None

TOTAL PROJECT COST: \$727,958

PROJECT DESCRIPTION:

This project includes the rehabilitation and reconstruction of the diversion structures and the main canal of the Huntley Project Irrigation District. The main objectives are to (1) rehabilitate deteriorated irrigation system improvements and (2) increase the amount of water that can be diverted during low river flow.

The Huntley Project is located along the Yellowstone River about 20 miles northeast of Billings; it supports 27,786 irrigated acres comprising 916 units. The project was designed and constructed by the U.S. Bureau of Reclamation and placed in operation in 1908.

The proposed work consists of three phases. The first phase consists of rehabilitation and reconstruction of the south half of the diversion weir in the Yellowstone River. The second phase consists of the expansion and rehabilitation of the diversion intake structures and pipes to the main canal. The third phase consists of the reconstruction and partial lining of the first 7.5 miles of the main canal.

The approximate construction costs are as follows:

Project Phase	Estimated Const.		Percent Project Total
	Cost	Range	
1. Weir Rehab. & Reconst.	\$15,000	\$15,000 - \$20,000	3%
2. Expansion & Rehab. of Intake Structures and Pipe	\$318,000	\$318,000 - \$420,000	62%
3. Main Canal Rehab. & Lining	\$200,000	\$200,000 - \$224,000	35%

TECHNICAL ASSESSMENT

In general, the designs and technical aspects of the improvements have not been done and therefore were not included in the application. However, no unusual or especially difficult work is proposed.

The north half of the diversion weir in the Yellowstone River was previously rehabilitated in 1988-89 as a district force account project. This proposal would complete the work on the south half of this weir. The work would also be designed and done by the district.

The expansion and rehabilitation of the diversion structures and pipe will be designed by outside consulting engineers. Four different alternatives were considered. The one selected has the lowest short- and long-term costs.



This work will increase the amount of water that can be diverted during low-flow conditions in the river. This proposed increase is from 500 to 750 cubic feet per second. The construction of another pipeline will be necessary to accomplish this.

The third portion of the project consists of main canal and tunnel rehabilitation and partial canal lining. Canal re-shaping and restoration will be done to restore the canal to its original section and grade. This includes reshaping banks and bottom filling. Major cracks and voids will be filled in three tunnels. Two sections of the canal totalling about 2,500 feet will be lined with a membrane that is yet to be designed. The district proposes to design and then do this work by force account.

In a review letter, the Bureau of Reclamation said that drawings of the proposed work are necessary to evaluate the application.

#### FINANCIAL ASSESSMENT:

The district's estimated operating budget for 1991 is \$534,000. These operation, maintenance, and assessment costs will be collected through an \$18.00 per irrigated acre assessment and other district revenues. The loan from DNRC would be repaid from an additional assessment of about \$3.00 per irrigated acre, based on 10 percent interest for 20 years. This is roughly a 17 percent increase. The district has no other outstanding bonds.

In its review letter, the Bureau of Reclamation points out that the application does not contain sufficiently specific economic and financial data to assess the irrigator's ability to pay for the project.

Through an oversight by the applicant, the costs associated with bond administration were omitted from the project cost estimate. The bond administration costs are typically calculated at a rate of 3 percent of the project cost. For this application, that cost would be \$21,859.

#### ENVIRONMENTAL NOTE:

The work should result in an increased amount of water being available for crop irrigation within the Huntley Project Irrigation District. This will be especially significant during periods of low river flow. This increased flow and improved reliability should result in greater crop production. Reduced canal losses should also reduce areas of saline seep.

Negative environmental impacts during construction should be relatively minor. The applicant will obtain necessary U.S. Army Corps of Engineer and State of Montana permits (404 and 310).

The most significant environmental impact could be increasing the amount of water diverted from the Yellowstone River during periods of low flow. This can best be assessed by the Department of Fish, Wildlife and Parks. Outside public involvement and discussion might also be appropriate in reviewing and developing this project.



RECOMMENDATIONS AND CONTINGENCIES:

The applicant has requested a loan of \$727,958. The applicant has also requested that the bond administration costs be added to the request.

DNRC therefore recommends a \$749,979 (\$727,958 plus \$21,839 bond administration) loan from the sale of coal severance tax bonds to be paid over a maximum of 20 years. The loan shall be secured by an irrigation district bond issued in accordance with Title 85, Chapter 7, Part 20, MCA. The interest rate shall be at the rate at which the state bond is sold.

Funding is contingent on the following:

1. The district's water rights would not be exceeded.
2. Final plans and specifications must be approved by DNRC.
3. The use of senior water rights and the fishery is not adversely affected by the district's increased diversion during low flows.

---

Project No.: PL-4

APPLICANT NAME: Beaverhead County Red Rock River Water and/or Sewer District

PROJECT/ACTIVITY NAME: Lima Dam Rehabilitation

AMOUNT REQUESTED: \$3,040,000 - DNRC loan

OTHER FUNDING SOURCES AND AMOUNTS: \$ 16,000 - Applicant

TOTAL PROJECT COST: \$3,056,000

PROJECT DESCRIPTION:

This project consists of the major reconstruction of the Lima Dam including the outlet works and the principal spillway. The dam is 54 feet high by 455 feet long and impounds about 84,000 acre-feet of water at the normal pool elevation. It is classified as a high-hazard dam, the failure of which could cause loss of life and serious economic damage.

The dam is located on the Red Rock River about 15 miles east of Lima in Beaverhead County. The dam is owned by the Water Users Irrigation Company and is leased to the applicant, Beaverhead County Red Rock River Water and/or Sewer District. The original dam, which was smaller than the existing one, was built in 1890 and washed out in 1894. The dam was reconstructed in 1908 and failed in 1933. It was reconstructed again and placed in service by 1939.

A 1980 U.S. Army Corps of Engineers report indicated major safety concerns. The spillway capacity is inadequate by current design and safety standards and the embankment stability analysis was lacking. Other repairs and investigations are recommended.

In 1988, DNRC provided a grant to fund a feasibility study. This was completed by HKM Associates in 1989 and is the basis for this project application. It provides a great deal of technical, financial, economic, and environmental information and is available for reference.

Several alternatives were considered and evaluated as part of the study. The recommended plan has the following major features:

1. Replace the entire outlet works, tunnels, gates, and gate tower.
2. Recontour the downstream face of the dam and cover it with roller compacted concrete to provide protection during overtopping by large floods, such as the Probable Maximum Flood.
3. Replace the existing principal spillway with a roller compacted concrete spillway.

These modifications would allow the dam structure to meet dam safety criteria for stability and passage of the Probable Maximum Flood while minimizing the long-term cost of the project.

The main purpose of the dam is to provide supplemental irrigation water for about 16,000 acres of hay land. There are 28 land owners. Secondary uses include wildlife, recreation, and flood control.

#### TECHNICAL ASSESSMENT:

The feasibility study and report completed by HKM Associates in 1989 provides a good preliminary technical basis for evaluating this project. This study included a geotechnical investigation, a hydrologic analysis, a structural investigation, rehabilitation and reconstruction alternatives, cost estimates, and other economic and financial information. In summary, HKM found that rehabilitation of the existing dam is technically but not economically feasible without financial help from others.

In order to pass the extremely large design flood, the entire dam will be designed for overtopping. This is cheaper than designing a large principal spillway that could bypass the same amount of water. Although somewhat new and innovative, such a design has been built into other dams. The project would include the reconstruction of the principal spillway, but it will be much smaller than otherwise needed.

In addition, the outlet works will all be replaced to enhance the facility's safety and service life.

Technical details on the various alternatives and their associated costs are included in the feasibility study for reference as needed.

#### FINANCIAL ASSESSMENT:

The estimated direct construction costs are \$1,887,000 (1989 basis). With all associated costs including administrative, engineering, bond sale costs, a 25 percent contingency and a 10 percent inflation allowance, the estimated total project cost is \$3,056,000.

Farm budget studies contained in the feasibility study indicate that under current conditions, the district irrigators are not able to pay for improvements. However, the irrigators generally agree that they would be willing to pay up to \$7.00 per acre for the improvements, in spite of the fact that doing so would reduce their return on equity below recommended guidelines developed by the federal government. In 1989, the assessments were \$1.45 per acre on 16,222 acres.

The district has no debt and a reserve fund of about \$100,000. However, because of the importance of the reconstruction of this dam for safety and wildlife, the district is requesting a loan of \$3,040,000 at zero percent interest for 30 years. If a loan were issued at a zero percent interest rate for 30 years, assessments would increase by about \$6.33 per acre per year.

To expedite the project and minimize costs, the district prefers not to pursue other sources of federal funding from the Bureau of Reclamation.

#### ENVIRONMENTAL NOTE:

From a construction standpoint, this project would have relatively little environmental impact. However, the reservoir has some unique and important environmental considerations. They are as follows:

1. The only two breeding pairs of peregrine falcons in Montana nest within one-half mile of the reservoir and use it as a feeding area.
2. The reservoir supports the largest population of non-breeding (one and two year old) molting Canadian geese in the northern Rockies. The peak population is about 9,000 birds.
3. The area is used by about 100 young molting trumpeter swans. In addition about 20 adult pairs nest in the area.
4. It is an important migratory staging area for waterfowl and shorebirds. Concentrations of over 35,000 ducks have been observed in the fall.

The only negative impact the proposed project will have on these valuable natural resources is the planned drainage of the reservoir required to replace the outlet works. The district plans to mitigate this impact by draining the reservoir in late summer after the molting and breeding seasons. In addition, a cofferdam may be built to minimize the drop in the water level of the reservoir.

The public is making little use of the reservoir fishery. The Department of Fish, Wildlife and Parks would prefer to keep this use low to maintain the important waterfowl resources.



RECOMMENDATIONS AND CONTINGENCIES:

DNRC recommends a Coal Severance Tax Loan of \$3,040,000 at zero percent interest for 30 years. DNRC must review and approve the terms of the lease agreement between the district and the irrigation company.

The zero percent interest rate over a 30-year period is warranted on this project because:

1. The rehabilitated facility will increase safety for those downstream as well as water users supplied directly by the reservoir.
2. The project supports a unique and important wildlife area.
3. There will be no cost displacement for users. The project will not substantially decrease any existing operating or capital costs for users, therefore there will be no money to re-allocate for payment of project costs.

---

Project No.: PL-5

APPLICANT'S NAME: Seeley Lake - Missoula County Water District

PROJECT/ACTIVITY NAME: Water Treatment Plant

AMOUNT REQUESTED: \$922,150 - DNRC loan

OTHER FUNDING SOURCES & AMOUNTS: \$ 2,060 - City Funds

TOTAL PROJECT COSTS: \$924,210

PROJECT DESCRIPTION:

The Seeley Lake-Missoula County Water District requests a loan to improve its water treatment system. The district's existing water system relies on surface water from Seeley Lake. The raw lake water is brought through the intake piping into a wet well on the lake shore, where it is chlorinated and pumped directly to the distribution system. This system needs improvement to protect public health. Filtration must be installed and functioning in compliance with the Surface Water Treatment Rule by June 29, 1993.

For the Seeley Lake-Missoula County Water District to be in compliance with the Surface Water Treatment Rule the following improvements need to occur: construction of a treatment facility; provision of an additional storage facility; and installation of improvements to the pumping station.

The district intends to complete construction on the water treatment plant by 1992.



#### TECHNICAL ASSESSMENT:

Other water sources, including wells, and an infiltration gallery, were considered. The city and its consultant, Neil Consultants, has concluded that with the addition of prefiltration and a slow sand filtration system, the lake would be the best source. A slow sand filtration system has been piloted and should work well when used in conjunction with prefiltration roughing filters.

The loan application states that a slow sand filter with two modules rated at 400 gpm each, will be added. This is based on a 3-5 year projected user increase of 15 percent. If additional future capacity is required, more modules will be added. The minimum design standard requires at least two units. The proposed improvements meet this requirement.

The size and location of the existing 100,000 gallon storage tank is inadequate and inappropriate for current city needs and projected growth. City residents are concerned about repeated power outages, which limit fire protection.

To meet domestic and fire demands, a 200,000 gallon storage tank, the associated piping, and a new pumping station is needed. A total of 300,000 gallons of storage will be then available.

#### FINANCIAL ASSESSMENT:

The cost of the proposed project includes professional and technical services (\$93,600), construction (\$784,191), and contract and bond administration (\$46,419), totaling \$924,210. The funds requested for the scope of the work outlined are in line with current similar construction projects.

The Seeley Lake-Missoula County Water District will be paying off two G.O. Bonds in 1994 and 1995 and is requesting a loan payment deferment for this loan until 1995 in an effort to maintain rates near current levels. The district intends to issue revenue bonds to repay the requested DNRC loan. The current average user rate is \$19.50. This rate would increase by \$14.79 to \$34.29 if the deferment is not approved, assuming the DNRC loan is issued at a 10 percent interest rate for 20 years.

Other financing mechanisms being pursued include a Farmers Home Administration Loan, a Community Development Block Grant, and a special grant from the EPA's Small Systems Technology Committee.

Two general obligation bonds for line extensions totalling \$129,000 and two Farmers Home Administration loans totalling \$177,997 are outstanding.

#### ENVIRONMENTAL NOTE:

The site selected for the new plant is an old U.S. Forest Service clearcut area approximately 300 feet above and 600 feet east of the lake. An environmental assessment will be undertaken to assure that no adverse impacts will occur on Forest Service lands.

Other than the short-term impacts typically associated with municipal construction projects, no adverse impacts are anticipated with this project.

The positive impact that will result is an improved water quality that will meet state and federal safe drinking water standards.

RECOMMENDATIONS & CONTINGENCIES:

DNRC recommends a \$922,150 loan with no deferment of repayment. Security for the loan will be evidenced by the issuance of the water district's bond. An election shall be held in the district in accordance with Title 7, Chapter 13, Part 23, MCA.

The interest rate shall be two percentage points below the rate at which the state bond is sold for the first 5 years, and at the bond rate for the following 15 years. Any reduction in the loan request will result in a recalculation of the loan interest rate.

## CHAPTER III

### THE RENEWABLE RESOURCE DEVELOPMENT PROGRAM

#### A. Program Description and History

The Renewable Resource Development Program was established in 1975 by the Montana Legislature to develop renewable natural resources and to ensure that the quality of existing public resources are not significantly diminished by these developments. In order to do this, the Renewable Resources Development Program may provide funds for project grants. Only public entities are eligible to apply for funding under the Renewable Resource Development Program.

Grants may be for the purchase, lease, or construction of projects that conserve, manage, use, develop, or preserve land, water, fish, wildlife, recreational, and other renewable resources; for feasibility or design studies; or for the development of plans to rehabilitate, expand, or modify existing projects.

The Renewable Resource Development Program is in many ways similar to the Water Development Program discussed in Chapter I. To avoid duplication and confusion, these programs are administered together. Thus, reference will be made to the Water Development Program in this chapter, as applicable.

#### B. Program Funding

Initially the Renewable Resource Development Program received 2.5 percent of the half of the coal severance tax revenues not allocated to the constitutional trust fund. This equalled 1.25 percent of the entire coal severance tax. During the 1981 Legislature, SB 409 reallocated one-half of the Renewable Resource Development revenues to the new Water Development Program. In the 1987 Legislature, SB 373 directed that, beginning in FY90, 8 percent of the interest income from the resource indemnity trust fund would be allocated to the Renewable Resource Development account.

The legislature approves grants based on revenue projections for the upcoming biennium. Project funds are disbursed to approved grants based on the project's priority ranking as revenues are generated throughout the biennium.

#### C. Application Administration and Project Review Procedures

The Resource Development Bureau of the Conservation and Resource Development Division in DNRC administers the Renewable Resource Development Program. DNRC develops the application form and solicits proposals from municipalities, local governments, irrigation and conservation districts, state government, and the university system. Each grant proposal must include information to enable technical, economic, financial, and environmental assessments. DNRC evaluates the proposals and solicits technical and financial review assistance from outside the agency when appropriate.

All grant applications from public entities are submitted to DNRC in the even-numbered years prior to each legislative session. Following the assessment review, feasible grant projects are ranked and recommended funding levels are set by DNRC using established program and financial need criteria. Funding for these projects must be approved by the legislature.

#### **D. Project Ranking and Funding Recommendation Procedures**

For all grant applications, DNRC develops ranking priority order and funding level recommendations. These are presented to the governor and in turn to the legislature. Recommendations reflect specific goals required by law for the use of Renewable Resource Development funds. These goals are:

1. to enhance public resources
2. to optimize public benefits
3. to promote conservation and efficient use of renewable resources

Several other criteria have been adopted for the ranking system, primarily to make the Renewable Resource Development Program compatible with the Water Development Program. These are:

4. that there is a need and urgency for the project
5. that there is a potential for statewide application
6. that the project has not previously received funds (SB 373 made an exception to this criteria for projects that provide long-term compilation and management of natural resource information.)

Like the Water Development Program, the Renewable Resource Development Program has a \$100,000 grant limit.

#### **E. Grant Administration and Monitoring**

After grant funding is obtained from a legislative appropriations bill, DNRC staff works with grant recipients to develop a project work plan. The work plan is included in the grant agreement between the applicant and DNRC. In addition to the detailed work plan, each agreement includes a completion schedule and budget. Projects are initiated and funds are disbursed as trust funds, and coal tax revenues become available and in accordance with the project schedule.

During the course of a project, project sponsors are required to submit periodic progress and final project reports. Reports and field visits are used to monitor project progress and completion.

#### **F. 1990 Grant Applications for Renewable Resource Development Funding in FY 92-93**

In 1990, 61 applications were received under the Water Development and Renewable Resource programs; a total of 54 public grant applications for water and non-water related projects were received. Requests for grants under both



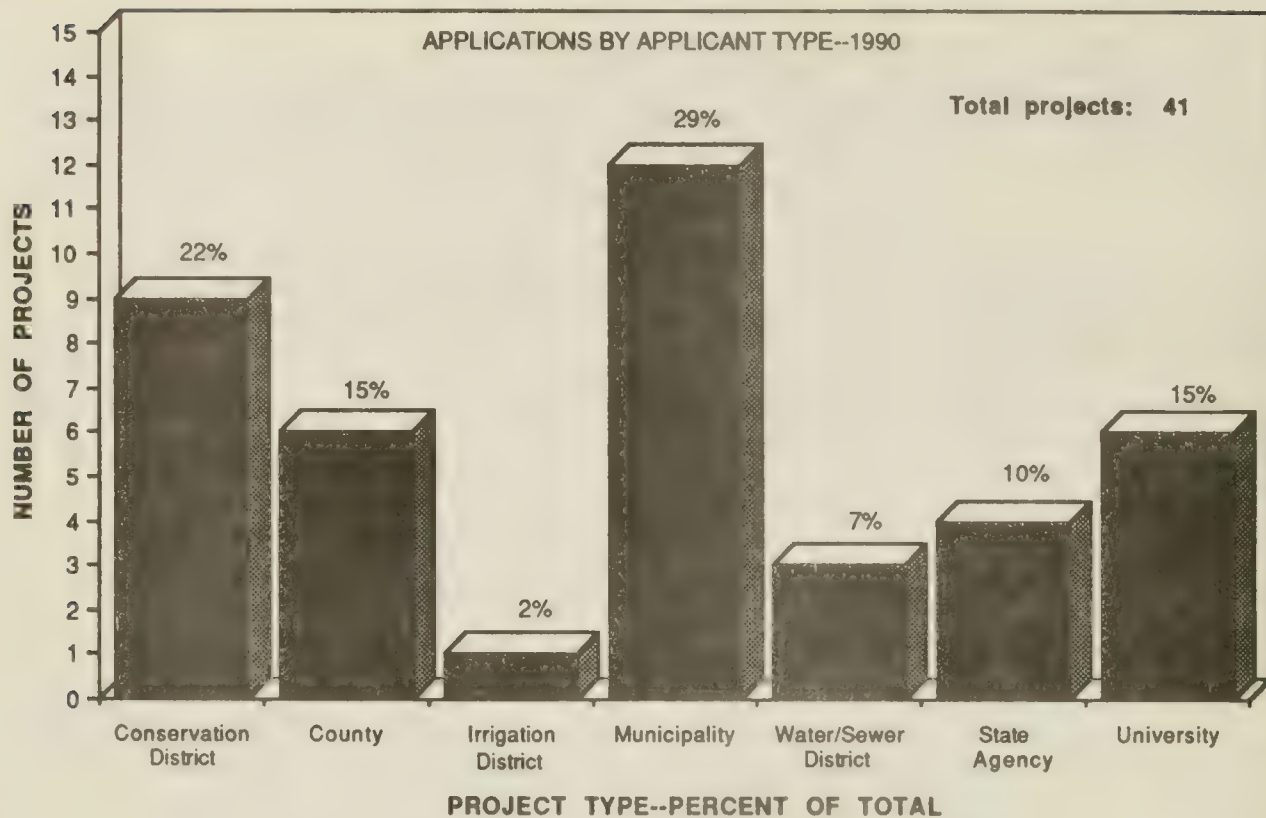
programs totaled more than \$3.5 million. Applications for water and non-water related projects are eligible under the Renewable Resource Development Program, while only water related projects are eligible for funding under the Water Development Program. DNRC assigned 41 of these applications for consideration under the Renewable Resource Development Program.

Figures 3.1 and 3.2 provide a breakdown of the Renewable Resource Development applications by the types of applicants submitting grant applications and by the types of project applications. Figure 3.3 depicts the amount of grant funds requested for the various project types.

Table 3 lists the project applications in order of their priority ranking and provides DNRC's funding recommendation for each.

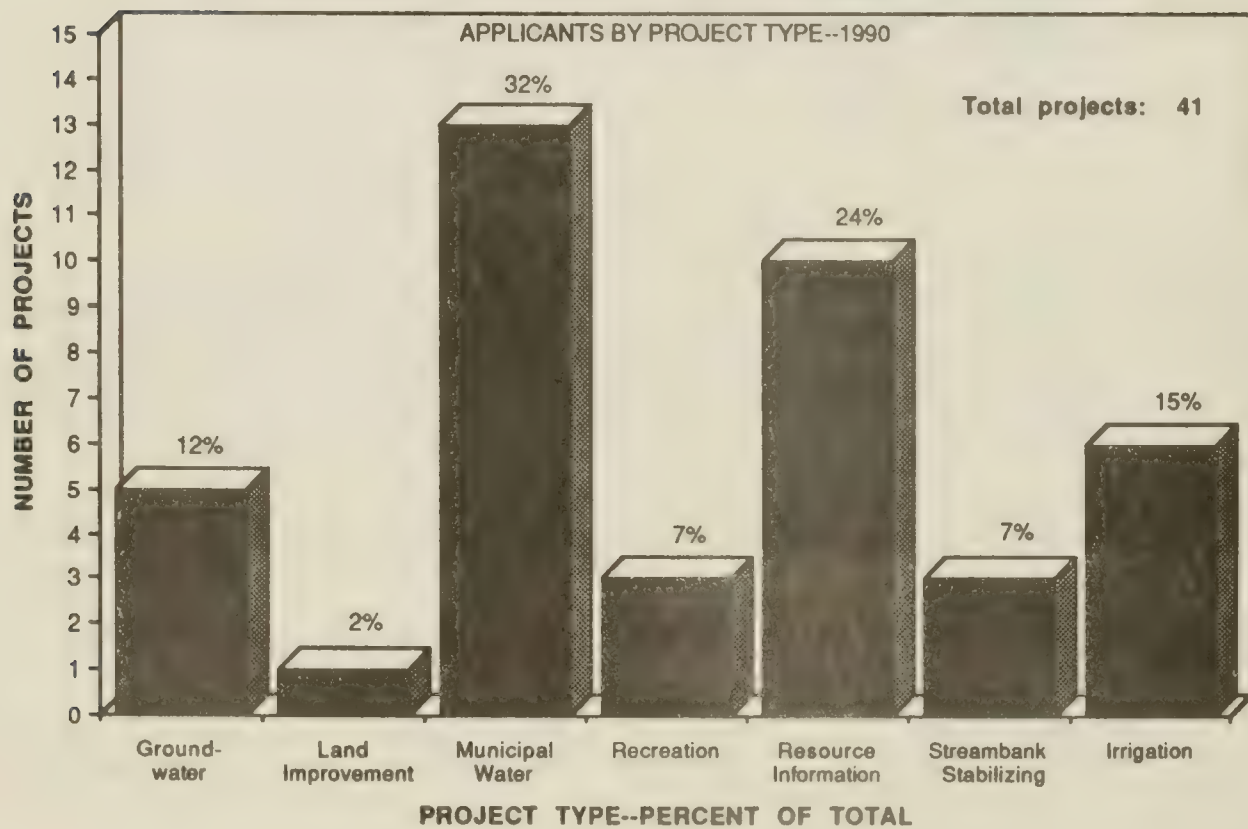
**FIGURE 3.1**

**RENEWABLE RESOURCE DEVELOPMENT PROGRAM**



**FIGURE 3.2**

**RENEWABLE RESOURCE DEVELOPMENT PROGRAM**



**FIGURE 3.3**  
**RENEWABLE RESOURCE DEVELOPMENT PROGRAM**

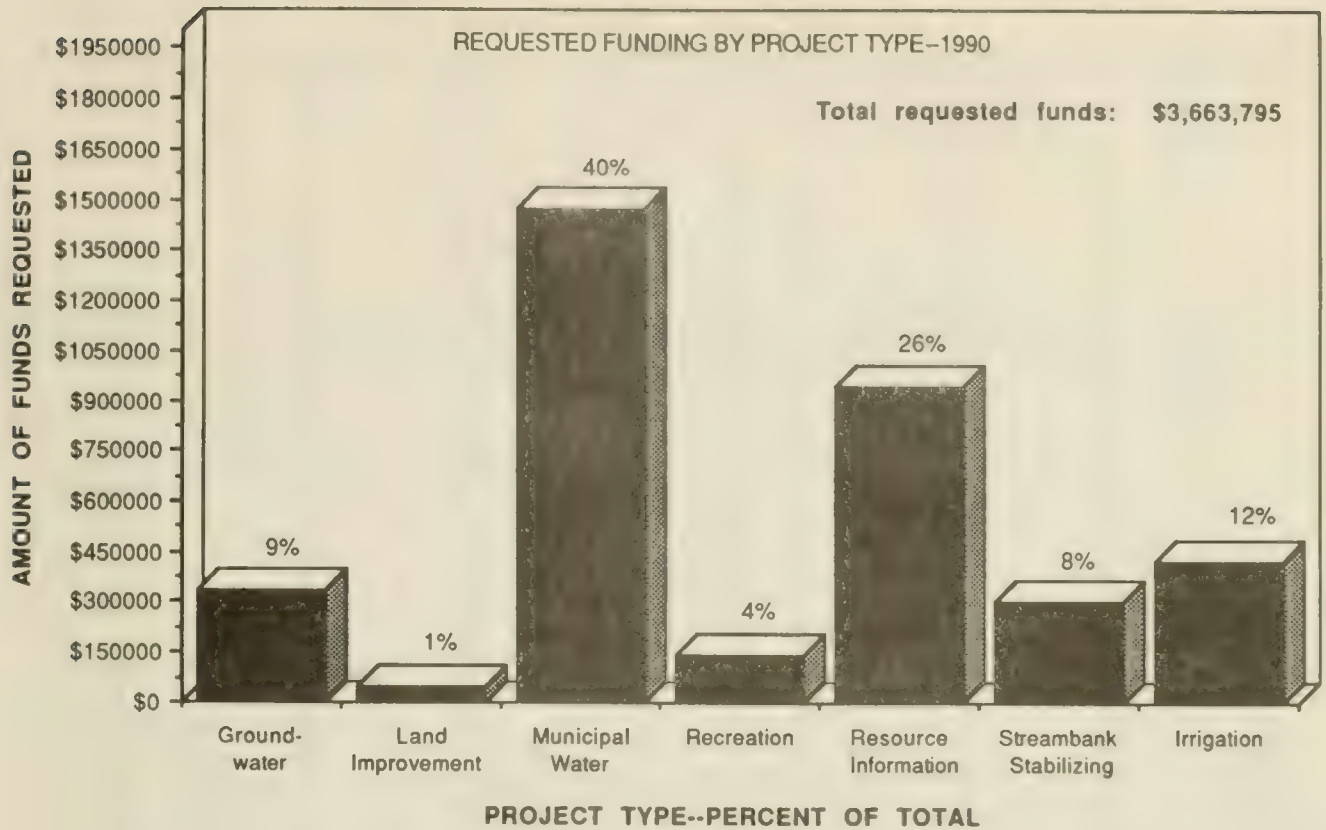


TABLE 3

Renewable Resource Development Program  
1991 Project Recommendations

Proj. No. & Rank Score (#-RRD-WD)	Project Sponsor	Project Name	Funding Recommended	Est. Cumulative Funds Available \$1,200,000
1-50-50	Jefferson Valley Cons. Dist.	Cereal-Legume Crop Rotating	\$ 48,677	\$ 51,323
2-48-55	Yellowstone County Cons. Dist.	Streambank Reinforcement	100,000	1,051,323
3-46-46	Montana State Library/NRIS	Montana Water Information System	99,866	951,457
4-45-54	Neihart, Town of	Neihart Water System	50,000	901,457
5-44-54	MSU/Montana Water Course	Montana Water Course	100,000	801,457
6-43-56	Ekalaka, Town of	Water Supply and Storage	49,975	751,482
7-42-42	Montana State Library/NRIS	Heritage Program	99,760	651,722
8-42-51	Polson, Town of	Wellhead Protection Program	76,055	575,667
9-42-56	Stillwater Conservation District	Evaluation of Plastic Lining	56,848	518,819
10-42-49	Three Forks, Town of	Water System Improvements	100,000	418,819
11-42-47	Butte Silver Bow Government	Blacktail Creek Restoration Project	100,000	318,819
12-40-56	Broadwater Conservation District	Irrigation Water Management Demonstration Project	100,000	218,819
13-40-46	Fallon County	Baker Lake Erosion Control/Recreation Path	15,361	203,458
14-40-40	MSU/Local Government Center	Solid Waste Information/Assistance	88,000	115,458
15-39-56	DNRC	Beaverhead Groundwater Study	100,000	15,458
16-39-53	Fort Shaw Irrigation District	Rehabilitation and Betterment Study	50,000	0
17-39-44	Darby School Dist. No. 9	School Park	25,300	0
18-38-52	Liberty County Cons. Dist.	Sweetgrass Hills Groundwater Study	100,000	0
19-38-49	Missoula County Cons. Dist.	Irrigation Diversion Alternatives	85,250	0
20-38-48	Outlook Water and Sewer Dist.	Water Well Connection	7,875	0
21-38-38	Miles City, Town of	Recycling Program	96,513	0
22-37-44	Missoula City/County Health Dept.	Aquifer Monitoring/Remediation	85,929	0
23-37-37	Carbon County et al.	Integrated Waste Management	45,437	0
24-36-47	Meagher County Cons. Dist.	South Side Canal Lining Project	37,500	0
25-35-40	Belt, Town of	Belt Sewage System Improvements	25,000	0
26-34-48	Teton County Cons. Dist.	Alternative Diversion Sites	11,780	0
27-33-44	Chinook, Town of	Milk River Weir Replacement	50,000	0
28-32-32	Columbus, Town of	Columbus Recreation Project	99,906	0
29-32-44	DNRC	GIS Project	0	0
30-30-37	Glasgow, Town of	Water and Wastewater	80,950	0
31-30-37	Big Sky Sewer District	County Water and Sewer District	33,750	0
32-29-33	Missoula City/County Health Dept.	Linda Vista Sewer Interceptor Project	100,000	0
33-27-37	Cascade/Teton County Cons. Dist.	Muddy Creek Study	100,000	0
34-23-28	Fairfield, Town of	Fairfield Waterway	14,169	0
35-21-28	MSU - Extension Service	Natural Resource Education	49,280	0
36-0-0	Lakeside County Sewer District	Loan Repayment	0	0
37-0-0	Montana Mines and Geology	Water Education Program	0	0
38-0-0	Flaxville, Town of	Loan Repayment	0	0
39-0-0	MSU	Evaluation of Ditch Linings	0	0
40-0-0	Dawson County	Aquafarm Water Feasibility Study	0	0
41-0-0	MSU-Eastern Agricultural Station	Movement of Nitrates	0	0

Highlighted projects are those not eligible for funding under the Water Development Program because they are non-water related projects



Project No.: RRD-1

APPLICANT NAME: Jefferson Valley Conservation District

PROJECT/ACTIVITY NAME: Cereal-Legume Rotations as Energy Efficient Cropping Systems in Montana-Phase II

AMOUNT REQUESTED: \$ 48,677

OTHER FUNDING SOURCES AND AMOUNTS:

\$ 20,900	- Local producers
\$ 10,890	- Montana Agricultural Producers, Inc.
\$ 16,650	- Coop. Ext. Service
\$ 6,500	- SCS

TOTAL PROJECT COST: \$ 103,617

PROJECT DESCRIPTION:

Jefferson Valley Conservation District, in cooperation with Montana Agricultural Producers, Inc., is requesting grant funds to continue with a cropping demonstration program for the next two years. The project will demonstrate the benefits of alternative cropping rotations, incorporating annual and perennial legume/pulse crops, to southwest Montana agricultural producers. Anticipated benefits include energy savings, reduced soil erosion, and enhanced soil productivity, water use efficiency, and farm profitability.

In 1988, through DNRC oil-overcharge funding, the first phase of this demonstration project (called "Cereal-Legume Rotations as Energy Efficient Cropping Systems in Montana") was initiated by the Jefferson and Madison conservation districts. Phase I examined a number of energy efficient alternative crops and their markets. Over the two-year life of the project, berseem clover, canola, Austrian winter peas, lupine, buckwheat, black medic, yellow field peas, and Sacramento light red kidney beans were evaluated. Two of these have already emerged as having significant impacts for growers in terms of energy savings and economic viability. Canola was found to be ideally suited for the growing conditions in Montana, has proven to have significant economic potential, and has emerged as an excellent rotational crop. For wheat, barley, and hay producers, canola helps break the disease and insect cycle, thus reducing the need for chemical control. Berseem clover also has gained acceptance by many growers for its nitrogen fixing and green manure characteristics in addition to its yield and non-bloat attributes.

Markets have emerged for these crops; a canola oil refinery was built and berseem clover fits very well into the existing hay and pasture markets. Phase I has proven successful from the standpoint of canola and berseem clover production.

#### TECHNICAL ASSESSMENT:

To continue into Phase II, Jefferson Valley Conservation District and Montana Agriculture Producers, Inc., in cooperation with the Montana State University Plant and Soil Science Department, SCS, Cooperative Extension Service, and local producers, will select crops and sites for demonstration purposes. Sites will include 10 10-acre plots within Madison, Jefferson, and Broadwater counties. During the second year of the project, six additional 10-acre demonstration plots will be selected. An evaluation will be made of the long-term impacts of nitrogen fixation through the use of annual and perennial legume/pulse crops. This will be accomplished through field trials and establishment of nitrogen budgets for previously analyzed crops and others having energy-saving potential. Associated soil erosion and water use efficiency effects will be considered. Informational programs will be used to promote awareness and acceptance by crop producers of these alternative crops that have the potential for nitrogen building while improving soil productivity, thus alleviating the declining fertility problem of Montana soils.

A series of field tours, public workshops, and written reports are planned to disseminate and discuss results to area providers.

#### FINANCIAL ASSESSMENT:

The estimated cost for Phase II is \$103,617. The majority (53 percent) of the budget is comprised of in-kind dollars. This is primarily growers' input costs, labor and equipment (\$26,600), plus professional/technical assistance provided by the Cooperative Extension Service, SCS, and the Montana State University Plant and Soil Science Department.

The grant portion of the budget is 47 percent of the total cost, or \$48,677. Principal components are field scout/technician salaries at \$21,511, project administration salaries and costs of \$18,806, and seed costs of \$7,600, plus \$760 for unexpected costs.

Jefferson Valley Conservation District will have overall responsibility for the project. Montana Agriculture Producers, Inc. will provide project coordination and administration, budget management, and will act as the liaison between the technical agencies and local growers.

#### ENVIRONMENTAL NOTE:

No significant detrimental impacts should result from the project. Long-term impacts may be beneficial if alternative crops that reduce energy needs and lessen soil erosion are identified and accepted.

#### RECOMMENDATIONS:

A grant of \$48,677 is recommended contingent on DNRC approval of the project scope of work and budget.

Project No.: RRD-2

APPLICANT NAME: Yellowstone County Conservation District

PROJECT/ACTIVITY NAME: Streambank Reinforcement and Erosion Control and Oxbow Restoration

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 400 - Yellowstone County Conservation District  
\$ 9,997 - ZooMontana (\$1,040 in-kind)

TOTAL PROJECT COST: \$ 110,397

PROJECT DESCRIPTION:

The Yellowstone County Conservation District is requesting grant funds, on behalf of ZooMontana, to design, construct, and demonstrate innovative stream diversion structures to re-open a closing oxbow and to rehabilitate eroded streambanks on a 1/2-mile section of Canyon Creek, a tributary to the Yellowstone River. The objective of the proposed treatments and improvements is to stabilize and correct existing stream and streambank problems along Canyon Creek in a manner that enhances wildlife and waterfowl habitat, enhances the aesthetic quality of the stream, and preserves the natural appearance of the stream. The proposed project is located at the planned ZooMontana zoological and botanical garden site west of Billings. The proposal is part of the \$4.5 million first phase of ZooMontana, an open air, natural habitat zoo.

The ZooMontana effort was started in 1982. In 1986, a land use master plan was completed and an office opened in Billings. Seventy acres of land were obtained in February of 1990. Construction to date has included a pedestrian bridge across Canyon Creek, a water well, and a plant nursery. The first phase animal exhibits have been selected and design of the education/administration building is being completed.

This project includes installation of a natural boulder weir structure, installation and streambank sloping, and revegetation which will preserve the natural appearance of the stream, eliminate erosion, create waterfowl habitat, and provide safe access for zoo visitors at the ZooMontana site. The project will also serve as a demonstration project, aided with signs and interpretive materials, to educate the public regarding the value of natural resource conservation.

TECHNICAL ASSESSMENT:

Canyon Creek is an ungauged, perennial flowing stream with an approximate drainage area of 140 square miles. Sections of Canyon Creek at the site have cut 5-foot to 30-foot overhanging banks that are actively eroding. At one site,



bank erosion has created a new oxbow. To correct these problems, stream enhancement measures will be installed at nine sites along the creek. Nine boulder weir structures will be installed at selected sites along with bank sloping and re-vegetation. The intent is to replicate natural flow and to continue sediment transport by adjusting the stream slope, bed shape, roughness, and cross-sectional form. This should direct the flow; allow maintenance or creation of pools, riffles, and bars; and relieve pressure on the eroded banks. Project construction is estimated to take 4 to 6 weeks.

The district, in conjunction with ZooMontana, will contract out all design and construction work. The project design and cost estimates in the grant application were provided by an in-state engineering firm and a design/construction firm experienced in this type of project.

This project could serve to demonstrate streambank stabilization methods to surrounding landowners and would allow the district to assess the affects of these methods on the overall stream. However, upstream problems, such as sediment-laden irrigation return flow and bank erosion, must be corrected if this restoration project is to be stable over the long term. Also, the possibility of this project affecting erosion, deposition, and channel geometry upstream and downstream of the project should be addressed.

#### FINANCIAL ASSESSMENT:

The total project cost is \$110,397, of which \$100,000 in grant funds is requested to cover \$5,702 in salaries and \$255 in associated costs, \$10,300 for labor costs, \$52,843 for equipment, and \$30,900 for materials. The applicant will pay administration salaries of \$400 with ZooMontana contributing \$9,997, including \$1,400 for salaries and \$8,997 for equipment. Contingencies are built into the construction cost figures. A miscalculation of total construction costs on the budget page of the application has been addressed and corrected.

The construction costs (labor, equipment rental, materials) for construction at each of the nine sites on the creek is given in the application. The costs range from \$1,500 to \$75,000.

The district, on behalf of ZooMontana, has also applied for a \$300,000 Reclamation and Development grant to install sewer and wastewater facilities, water wells, and a perimeter fence at the ZooMontana site.

#### ENVIRONMENTAL NOTE:

Water quality may be temporarily impacted during the construction phase due to increased suspended solids and turbidity. Stabilizing the streambank and gradient should result in improved water quality, enhanced wildlife and waterfowl habitat, and reduced soil erosion, in the long run.

#### RECOMMENDATIONS:

DNRC recommends a grant of up to \$100,000 contingent on DNRC approval of the scope of work and budget. The scope of work will need to address two DNRC concerns. First, the applicant will be required to develop a plan to be approved by DNRC to correct streambank erosion, sediment loading, and stream flow fluctuations in the Canyon Creek watershed, particularly upstream of this project. The applicant is encouraged to promote and implement this plan with



affected landowners. The applicant will also be required to monitor and report on the effectiveness of the project at this site as well as effects up and downstream.

---

Project No.: RRD-3

APPLICANT NAME: Montana State Library

PROJECT/ACTIVITY NAME: NRIS/Montana Water Information System Core Operations

AMOUNT REQUESTED: \$ 99,866

OTHER FUNDING SOURCES AND AMOUNTS:

TOTAL PROJECT COST: \$ 99,866

PROJECT DESCRIPTION:

The Montana Natural Resource Information System (NRIS) was created by the legislature in 1985 to improve statewide efforts to manage the increase in natural resource data and make existing sources more accessible. Since its inception, the NRIS program has made significant progress toward achieving its mandate. The State Library is requesting funds to continue the development of the NRIS program, and specifically to fund the Montana Water Information System.

The Montana Water Information System (MWIS), initiated by NRIS in 1987, provides a starting point for locating water resource information contained in the records of several agencies. The Montana Water Information System is a central contact point for statewide data on surface water, groundwater, water quality, riparian areas, climatic data, and on-line interconnection with all major federal water-related databases.

TECHNICAL ASSESSMENT:

There are two key reasons the NRIS program is successful. First, the program is housed in the Montana State Library, which provides a "neutral corner" to disseminate sometimes controversial information without bias. Secondly, NRIS decided against the traditional "centralized database" approach, where users are tied into a single system. These centralized databases are costly to implement and become too complex to operate and maintain given diverse user needs. Instead, NRIS provides a central access point to decentralized data sources; it is not a central data storage facility, but rather a road map to identify important data sources and provide access to them. This strategy has enabled each resource agency to manage its own data, but also allows for maximum sharing of data among participating agencies and organizations.

Demand for water resource data increased dramatically as the Water Information System became fully operational in October 1989. Access to all major federal, state, and local water resource databases is available. Also available now is access to the National Weather Service database containing

climatic and some streamflow information. NRIS has concentrated on making this database as accessible as possible, and on teaching frequent users how to use it and understand its potential.

Another key achievement was the completion of the first electronic edition of the "Water Data Directory" with more than 20 water resource data sources described and indexed in detail. It provides a handy user-friendly tool to locate sources pertinent to the needs of NRIS users.

The Montana Water Information System will continue to be managed by the NRIS water information specialist with technical and clerical help from the NRIS staff assigned to the system and with support from the director. Project work will be guided by the Montana Water Information System's advisory committee.

#### FINANCIAL ASSESSMENT:

Core operating funds for the entire NRIS program for the 1992/1993 biennium are projected at \$507,226. The overall budget for all NRIS services is expected to be \$1,187,413. Funds will come from this and other RIT grants; Fish, Wildlife and Parks license fees; the EPA Superfund; the Bonneville Power Administration; and the Office of Surface Mining. Funds provided under the Renewable Resource Development and Reclamation Development programs result in significant federal match.

For the Montana Water Information System, NRIS requests a \$99,866 grant of which \$89,280 is for salaries, \$7,586 for operations, and \$3,000 for equipment.

#### ENVIRONMENTAL NOTE:

The services provided will result in no direct environmental impact.

#### RECOMMENDATIONS:

A grant of \$99,866 is recommended contingent on DNRC approval of the project scope of work and budget.

---

Project No.: RRD-4

APPLICANT NAME: Town of Neihart

PROJECT/ACTIVITY NAME: Water System Improvements

AMOUNT REQUESTED: \$ 100,000 - Grant  
\$ 200,000 - Loan

OTHER FUNDING SOURCES AND AMOUNTS: \$ 213,500 - FmHA Grant  
\$ 237,000 - EPA Grant  
\$ 5,800 - Neihart

TOTAL PROJECT COST:

\$ 756,300

PROJECT DESCRIPTION:

The Town of Neihart requests grant and loan funds to rehabilitate its water system by installing a new treatment facility and distribution system. The town has been under a court order since 1988 to improve the quality of the water that is delivered to the users of Neihart. The primary source of water is O'Brien Creek. This surface water supply is chlorinated but not filtered. As a result of insufficient treatment, water quality standards have been frequently violated. Since 1983, boil orders have been issued by the State of Montana. A secondary source of water is Black Chief Springs. Water from this source is of limited quantity, insufficient to meet the demand. This supply is not treated, nor is it planned to be used as part of the water system improvements.

The town has employed a consulting engineer to analyze the existing system and prepare recommendations for improvements. The engineer has recommended that O'Brien Creek continue to be used as the source of water supply and the water be filtered and disinfected. In addition, it is proposed that the entire water distribution system be replaced.

The existing system consists of cast iron pipes buried at shallow depths. Because of these shallow depths, water is allowed to run continuously during the winter months to prevent freezing of the lines. Replacement of the entire distribution system with ductile iron mains and copper service lines buried with seven feet of cover is proposed.

Total cost of the project is estimated at \$756,300. The town is seeking both a grant and loan from DNRC to assist in funding this project.

TECHNICAL ASSESSMENT:

Neihart has employed a consulting engineer to assist in developing a solution to its water system problems. An engineering report has been written which documents the conditions and problems associated with the existing system, analyzes alternatives for solving the water system problems, recommends alternatives, and presents cost estimates.

The water system was constructed in 1892 and not only supplied water to the Town of Neihart, but also provided electrical power through a 118 hp turbine generator. While the generator was in operation, the water ran continuously to provide power to the town. With the continually moving water, the lines did not freeze even at their shallow burial depths. The generator is no longer used.

Water from O'Brien Creek has been and continues to be the primary source of water. It is disinfected but not filtered, and has violated state turbidity and bacterial standards. Black Chief Springs is a secondary source that is untreated.

The engineering report presents a technical evaluation of alternate sources of water supply to include O'Brien Creek, Black Chief Springs, and groundwater. The advantages and disadvantages of each source have been analyzed and the selected water source is O'Brien Creek. The report recommends seasonal rough filtration, slow sand filtration, and disinfection of this supply. A pilot plant



study is currently being conducted to assess the suitability of slow sand filtration as a means of treatment for this supply. The study will continue through 1990, but results to date indicate that the slow sand filtration preceded by rough filtering will adequately treat the water.

Because of shallow burial depths and leaking lead joints, the report also recommends complete replacement of the transmission and distribution system. The existing cast iron pipes will be replaced with ductile iron pipe.

The Water Quality Bureau is in support of this project and states that the present water system "is a definite public health threat." The Bureau feels that Neihart should proceed with the project assuming there would be no contribution from EPA since there has been no EPA written commitment. Additional study data must be presented before the Water Quality Bureau can approve slow sand filtration as the form of treatment.

#### FINANCIAL ASSESSMENT:

The total cost of the project is \$756,300. The applicant is requesting a \$100,000 grant and a \$200,000 loan from DNRC. In addition, grant funds will be secured from the FmHA (\$213,500), and the EPA (\$237,000). The town will provide \$5,800 of its own money. DNRC funding would be used to pay \$7,500 in bond council fees; \$99,300 in professional salaries and related travel; \$171,170 in construction cost; and \$22,030 for bond administration.

Neihart has attempted to secure Community Development Block Grant money in the past, and while the project ranks very high in terms of need and technical approach, the town was declared ineligible for funds under this program because the seasonal cabin owners had to be included in the personal income analysis. Because of this, the income level exceeded the allowable level. Long-term funding from FmHA looks good, and EPA has made a tentative offer, through its Small Systems Committee, to provide the treatment equipment free of charge. The small rate base (104 homes, 80 active accounts) severely reduces debt service load capacity by the system users. The current monthly water user rate of \$20 will be increased to \$86; thus, the \$200,000 DNRC loan will effectively deplete the town's ability to satisfy debt. It is therefore essential that grant monies become available in order for this project to be completed.

#### ENVIRONMENTAL NOTE:

This project should have no long-term impacts on the environment. The only adverse impacts are those minor and short-term impacts typically associated with construction projects such as increased noise, dust, and stream bed disturbance. Benefits will be increased water quality to the system users, elimination of leaks, and providing a reliable year round-water supply.

#### RECOMMENDATION:

The DNRC recommends a grant of \$50,000 and loan of \$150,000 for the Town of Neihart. Funding will be dependent on the applicant securing other funding.



---

Project No.: RRD-5

APPLICANT NAME: Montana State University  
The Montana Watercourse, Montana Water Resources Center

PROJECT/ACTIVITY NAME: Public Education in Water Management

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 18,000 - Private foundations and the  
federal government  
\$ 40,072 - Other agencies

TOTAL PROJECT COST: \$ 158,072

PROJECT DESCRIPTION:

The applicant requests funds to provide Montana's citizens, including water users, public interest groups, legislators, professional water managers, and teachers, with timely information on the management and use of Montana's water resources. A survey conducted by the Montana Watercourse identified several broad themes as priority topics: water rights, basic facts about water resources in Montana, management, conservation, water quality, and multi-use project management.

Using a variety of teaching methods, the project will provide the public with the unbiased facts behind complex water management policies and water use issues to develop a sense of ownership in water management decision making. Adult education modules will be developed for each topic. Modules will consist of workshops, radio and television spots, short courses (2-5 days), displays, and written materials such as fact sheets, reference guides, newspaper articles, and directories.

Modules will consist of the following:

1. Special topic workshops - 2, 4, and 8-hour workshops; target audience would depend on the topic.
2. Radio and television spots - Weekly or monthly public service announcements or five-minute segments, using guest speakers and Montana Watercourse staff.
3. Short courses - Day-long or week-long short courses on each of five core topics.
4. Displays - A portable display with interchangeable graphics and text. Materials will be developed for each of the five core topics.

5. Written materials -

- A. The Montana Water Reference Manuals
- B. The Montana Water Directory
- C. Montana Water-guides
- D. Water Resource Issue Articles

TECHNICAL ASSESSMENT:

Public misunderstanding and misconception of basic water management principles, evident during the State Water Planning hearings process, signals a need for adult education in water management. An uninformed public will be unable to participate effectively in the decision-making process. The Montana Watercourse learning materials are designed to meet the adult education needs of water use interests, as well as the general public.

The benefits of a "clearinghouse" approach for the Montana Watercourse should be considered as part of the project. In addition to the informational materials to be produced, the Montana Watercourse project could provide news releases on meetings, workshops, and water use rates; abstracts of water articles; and edited tapes of conferences and workshops.

FINANCIAL ASSESSMENT:

Of the \$100,000 grant funds requested, the applicants identify \$52,000 in employee and contracted personnel (inclusive of benefits), for research and preparation of written materials, workshops, and news articles. Labor costs were estimated at \$12 per hour. Printing and production costs are estimated at \$37,200, and include the printing of 6,000 copies of the Reference Guides, 500 copies each of 20 different fact sheets, 5 workshop displays, 12 news articles, and an update of the existing Water Directory. Travel and other costs of \$10,800 make up the balance. Need for continued funding to update the printed materials beyond the two-year project period was not addressed in the application.

ENVIRONMENTAL NOTE:

No direct impact on fish, wildlife, or water quality will occur.

RECOMMENDATIONS:

A grant of \$100,000 is recommended contingent on DNRC approval of the project scope of work and budget.

---

Project No.: RRD-6

APPLICANT NAME: Town of Ekalaka, Carter County

PROJECT/ACTIVITY NAME: Water Supply and Storage Project

AMOUNT REQUESTED: \$ 50,000 - Grant  
\$ 100,000 - Loan

OTHER FUNDING SOURCES AND AMOUNTS: \$ 49,000 - City Funds

TOTAL PROJECT COST: \$ 199,000

PROJECT DESCRIPTION:

This project will increase the water supply and provide additional storage for the Town of Ekalaka. The project will include a new production well complete with chlorination facilities, a new 100,000-gallon water storage reservoir, and a new telemetering control system.

Ekalaka is located in the southeast corner of Montana about 80 miles southeast of Miles City. The town is the county seat for Carter County. Potable water supplies are difficult to develop in the area, so two rural schools and 30 ranches haul drinking water from town.

TECHNICAL ASSESSMENT:

Ekalaka has done an exceptional job of analyzing its water system needs. Some assistance has also been obtained from consulting engineers. The town has also obtained advice from ISO Commercial Risk Services, the Water Quality Bureau, and its volunteer fire department. Ekalaka needs another good quality production well. The town currently relies on one good well and three wells that have sand or water quality problems.

A test well has not yet been drilled in preparation for drilling the proposed production well; it would be prudent to do so. Consistent with the Water Quality Bureau's recommendation, Ekalaka plans to build a pump house with gas chlorination facilities. An overall water treatment plant for the town was not proposed or considered, but the capital cost and operation will undoubtedly be very expensive.

The town now has one water storage reservoir with a capacity of 100,000 gallons. It needs an additional reservoir for normal operational and emergency reserves. Another 100,000 gallon buried concrete tank adjacent to the existing one is proposed. This will provide the necessary storage at a low cost. An alternate, bolted-steel tank would result in warmer water in the summer and potential freezing problems in the winter and so was rejected.

The town also proposes a radio-telemetry and float-control system to replace pressure switches and manual pump operation. This will improve the system's reliability and safety.

The Montana Bureau of Mines and Geology highly recommends that well number 2 be plugged and abandoned as a provision for state grant and loan funding.

#### FINANCIAL ASSESSMENT:

The finances for this project are to come from three sources.

Twenty-five percent, \$50,000, will be paid in cash by the town from an established water system reserve fund. This fund has a current balance that is just short of the required amount. Another 25 percent is being requested as a DNRC grant. The balance of \$100,000 is to be financed through the requested DNRC loan. DNRC grant funds will be applied to construction costs.

The town has no general obligation bonds and only one set of project revenue bonds which were issued in 1986 for other water system improvements. The current balance on these revenue bonds is \$177,575 with over \$37,500 in cash on hand for future payments. A rate increase of about \$33 per year per user will be requested from the Public Service Commission to pay off the revenue bonds for the DNRC loan.

#### ENVIRONMENTAL NOTE:

The proposed project will not result in any significant temporary or long-term impacts on the environment. The ground at the reservoir site will be disturbed and then reclaimed through revegetation. Water users in the community and other area users will benefit from an improved water system with greater reliability and more capacity. The water will also be of higher quality if more is taken from the best aquifer in the area.

#### RECOMMENDATIONS:

DNRC recommends the requested grant of \$49,975 and a loan of \$100,000 contingent upon DNRC approval of final scope of work and budget. Any reduction in the scope of the project will result in a proportionately smaller grant. If grant funding is not available, the town may request a DNRC loan of up to \$200,000 for the total project.

Well number 2 shall be plugged and abandoned under applicable rules and guidelines after the new production well is operating.



---

Project No.: RRD-7

APPLICANT NAME: Montana State Library

PROJECT/ACTIVITY NAME: NRIS/Montana Natural Heritage Program

AMOUNT REQUESTED: \$ 99,760

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 99,760

PROJECT DESCRIPTION:

The Montana Natural Resource Information System (NRIS) was created by the legislature in 1985 to improve statewide management of natural resource data and make existing sources more accessible. Since its inception, the NRIS program has made significant progress toward achieving its mandate. The State Library is requesting funds to continue the development of the NRIS program, and specifically, to fund the Montana Natural Heritage Program.

The Montana Natural Heritage Program, created by the 1985 Legislature, is a comprehensive, computer-assisted inventory of Montana's biological resources, emphasizing rare, threatened, or endangered plant and animal species and biological communities. In 1990, with more than 5,000 records in the databases, the Heritage Program was instrumental in land management decision-making. The program facilitates economic development without irreparable damage, even in environmentally sensitive areas.

TECHNICAL ASSESSMENT:

There are two key reasons the NRIS program is successful. First, the program is housed in the Montana State Library, which provides a "neutral corner" to disseminate sometimes controversial information without bias. Secondly, NRIS decided against the traditional "centralized database" approach, where users are tied into a single system. These centralized databases are costly to implement and become too complex to operate and maintain given diverse user needs. Instead, NRIS provides a central access point to decentralized data sources; it is not a central data storage facility, but rather a road map to identify important data sources and provide access to them. This strategy has enabled each resource agency to manage its own data, but also allows for maximum sharing of data among participating agencies and organizations.

The Heritage Program is operated by staff of The Montana Nature Conservancy, under contract to the Montana State Library and the NRIS program. Despite the contractual relationship, the Heritage Program is integrated with all other NRIS activities, and long-term plans call for bringing the Heritage staff on board as state employees.

Through more than four years of operation and service to users, the Heritage staff has continued to maintain, revise, update, and develop all major databases managed by the program. These include a ranked checklist of all Montana vertebrates and of high-ranking plants, a list of more than 600 abstracts on each vertebrate species in the state, site-specific element occurrence records, and a listing of 2,600 pertinent secondary source abstracts.

Another vital activity of the Heritage Program requires staff to make a constant effort to communicate with state and federal agencies, academic institutions, and neighboring Natural Heritage Programs to solicit input and exchange data to promote database development, growth, and use. A related role of the Heritage Program is to provide technical expertise in the areas of botany, ecology, and zoology as appropriate and requested.

FINANCIAL ASSESSMENT:

Core operating funds for the entire NRIS program for the 1992/1993 biennium are projected at \$507,226. The overall budget for all NRIS services is expected to be \$1,187,413; funds will come from this and other RIT grants; Fish, Wildlife and Parks license fees; the EPA Superfund; the Bonneville Power Administration; and the Office of Surface Mining. Funds provided under the Renewable Resource Development and Reclamation Development programs result in significant federal match.

For the Natural Heritage component, NRIS requests a \$99,760 grant, of which \$11,160 is for salaries, \$86,600 is for operations, and \$2,000 for equipment.

ENVIRONMENTAL NOTE:

The services provided will result in no direct environmental impact.

RECOMMENDATIONS:

A grant of \$99,760 is recommended contingent on DNRC approval of the project scope of work and budget.

---

Project No.: RRD-8

APPLICANT NAME: City of Polson

PROJECT/ACTIVITY NAME: Wellhead Protection Project

AMOUNT REQUESTED: \$ 76,055

OTHER FUNDING SOURCES AND AMOUNTS: \$ 6,106 - City of Polson

TOTAL PROJECT COST: \$ 82,161

#### PROJECT DESCRIPTION:

The City of Polson requests a DNRC grant to identify the wellhead protection area for three municipal wells used by the city for its public water supply.

The City of Polson Municipal Water System provides domestic water to over 3,000 city residents. Recent instances of contamination in downtown Polson and the uncertainty of the continued use of surface water as a supplemental water supply have caused city and county officials to become concerned about current and future groundwater quality. In response to these concerns, Lake County and the City of Polson want to initiate a wellhead protection program that will assess current threats to groundwater quality, provide information to safely site new wells, and develop strategies to eliminate or mitigate existing sources of contamination.

This project will delineate Wellhead Protection Areas for three municipal wells that currently supply domestic water to city residents and will identify current potential sources of contamination within each Wellhead Protection Area. It will develop management strategies to protect municipal wells from identified potential sources of contamination. The project will also develop contingency plans for each municipal well in response to well contamination and will identify areas where new wells can be located with a minimal potential for future contamination.

#### TECHNICAL DESCRIPTION:

Federal law (SDWA 1986) mandates that states develop and implement wellhead protection plans for public water supplies. This project will assist Montana in complying with that federal mandate.

The applicant used the EPA's 1987 publication "Guidelines for Delineation of Wellhead Protection Areas" as a guide to approaching the development of this wellhead protection plan. Various methods of wellhead protection and delineation are outlined in this guide. The City of Polson will use the fourth alternative, analytical methods, to determine the zones of contribution for each of the three wells.

Two observation wells for each well will also be installed. Pumping tests of each of the three production wells will be conducted to test water quality and aquifer characteristics. The observation wells will be left in place to be used as future monitoring wells. Potential sources of contamination will be noted by identifying adjacent land uses that have the potential to contaminate the wells.

Management strategies that will enable the city to protect the existing and future wells will be developed. These include zoning ordinances, source prohibitions, purchase of properties, and groundwater monitoring. A contingency plan will be developed to address the possibility that one or more wells might become contaminated. The plan will present short- and long-term alternate water sources and emergency procedures. The project will also identify new potential well sites. These sites will be examined, and wellhead protection areas identified.



The Water Quality Bureau supports this project with the provision that the project be conducted in accord with the state's wellhead protection program. This program should be in place sometime in early 1991.

FINANCIAL ASSESSMENT:

The applicant estimates the total cost of the project at \$82,161, of which \$76,055 is requested through a DNRC grant. The remaining \$6,106 will be provided by the City of Polson.

The applicant indicates that the budget estimates have been made by a consulting firm with expertise and experience in the field of wellhead protection planning, and that the budget accurately reflects the costs to complete the project. The amount of time allotted to complete each task is realistic and reasonable.

Professional services for consultant salaries and the collection of accurate hydrogeologic data account for most of the project costs. The costs for consulting services, observation well installation, project management, materials, and expenses are those typically encountered for projects of this type in Montana. The applicant's analytical methods approach provides the most cost-effective alternative that gives useful results. Numerical modeling of the aquifers could result in greater accuracy but the increased costs may not yield results significantly different than analytical techniques and therefore can not be justified in this case.

ENVIRONMENTAL NOTE:

The project will aid in reducing current contamination levels in the aquifers supplying water to the Polson municipal water system. The project will prevent future contamination sources from locating in an area where they may contaminate the water supply and will aid the city in selecting areas to locate future water supplies that will be least vulnerable to pollution.

RECOMMENDATION:

DNRC recommends a grant in the amount of \$76,055 for this project contingent upon DNRC approval of the scope of services and budget. The recommended amount represents 25 percent of the estimated total project cost. Projects with repayment potential are limited to a grant of 25 percent of the total cost.



---

Project No.: RRD-9

APPLICANT NAME: Stillwater Conservation District

PROJECT/ACTIVITY NAME: Stillwater Conservation District Evaluation of Plastic Lining and Fabrication Process

AMOUNT REQUESTED: \$ 77,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 2,195 - Stillwater Conservation District  
\$ 34,100 - Cove Ditch Irrigation Co.

TOTAL PROJECT COST: \$ 113,295

PROJECT DESCRIPTION:

The Stillwater Conservation District has long recognized the resource degradation caused by canal seepage within Stillwater County. An investigation by the Soil Conservation Service in 1982 identified a section of the Cove Ditch Irrigation Company canal in Stillwater County that was constructed in terrace gravel and seeped extensively. A further investigation in 1989 by HKM Associates confirmed the canal seepage as the source of salinized cropland and crop damage at this site. Landowners adjacent to this section of the canal documented crop losses in excess of \$15,000 in 1989.

The district requests grant funds to demonstrate a less costly, more effective and durable alternative to conventional ditch liners and the related installation processes. An installation process will be developed and demonstrated in the initial stage of the project. The material selected will be installed, evaluated, and demonstrated at the section of the Cove Ditch where seepage is occurring. The district has obtained Soil Conservation Service participation in the project and hopes the liner and installation process will be added to the accepted list of materials and processes for Soil Conservation Service technical and cost-share assistance.

The district will document the economic and engineering feasibility of the field tested ditch liner throughout installation and operation for a period of at least five years. Tours of the site during installation of the liner and after it is installed will be held.

TECHNICAL ASSESSMENT:

The proposed demonstration lining material is currently being tested under a 1989 grant funded by the Renewable Resource Development Program; the outcome of the current project has not yet been determined. Key to the success of the current project is the development of equipment that can reliably be used to put the lining material in place according to design specifications.

The experimental ditch lining material proposed by the district is comprised of a polyurethane resin fabric and calcium carbonate. The ingredients are mixed on site and applied 1/8 inch thick. The process requires only minimal ditch shaping and no soil covering. The estimated cost for installation and materials is \$85,000. This cost is less than the cost of using either of two equivalent conventional liners: a 20 mil polyethylene liner including installation would cost \$150,000, and clay liner with installation would cost \$100,000. These alternatives were evaluated and costs were verified by the Soil Conservation Service.

A 4,000-foot section of the Cove Ditch canal will be lined with 170,000 square feet of liner material. Installation preparation will be coordinated by a Soil Conservation Service engineer and a representative of Innovative Process Corporation, the lining company. The district and Cove Ditch Company will prepare an installation schedule and operation and maintenance agreement. Required canal preparation will be specified by the Soil Conservation Service area engineer in conjunction with Cove Ditch Irrigation Company. Once this is completed, Cove Ditch Company will provide bank shaping and dewatering under Soil Conservation Service inspection. Innovative Process Corporation will be contracted to install the 170,000 square feet of liner. The district will monitor the project, conduct field tours, and publish project results in agricultural publications.

The Soil Conservation Service suggests that the district coordinate this project with a similar project proposed by Montana State University. The Soil Conservation Service would prefer that Dr. Westesen of Montana State University monitor the lining project to give authoritative documentation to the results.

The Soil Conservation Service also recommends lining a shorter section of the canal to lessen the investment risk should it fail, but an MSU reviewer disagreed. Since the project will provide demonstration opportunities, the lengthy ditch provides a chance to demonstrate handling large quantities of the lining material in the field.

#### FINANCIAL ASSESSMENT:

The total proposed project cost is \$113,295. The district grant request of \$77,000 includes \$70,000 for materials and liner installation and \$7,000 to cover contingency costs. \$200 for contract administration and \$200 for printing costs were omitted from the budget request and will be paid from the \$7,000 contingency amount. The district will contribute \$550 for administrative costs and \$1,645 for technical costs. Cove Ditch Irrigation Company will contribute \$2,500 for labor, \$12,000 for equipment, \$1,500 for structure acquisition, \$15,000 for materials and installation, and \$3,100 for contingency costs. The \$15,000 for materials and installation includes matching dollars contributed by Cove Ditch Company landowners.

#### ENVIRONMENTAL NOTE:

If the experimental lining and installation process is successful in eliminating seepage from the Cove Ditch Company canal, the project will be environmentally beneficial. Barring a major accident, no environmental

contamination from the liquid plastic materials should occur. In transport to the site, the materials are stored in sealed drums. Impacts would need to be assessed more fully upon development of the project design and specifications.

RECOMMENDATION:

Since the Cove Ditch Irrigation Company may recover the cost of re-lining the Cove Ditch through fees, the project has "payback capability" and thus qualifies for only a specified percentage of the total cost. DNRC recommends a grant of up to 50 percent of the estimated total project cost to fund installation of the innovative ditch lining material in the 4,000-foot section of Cove Ditch. To optimize the demonstration value of this project and the likelihood of Soil Conservation Service's adoption of these materials as approved for technical and financial assistance, DNRC encourages the district to seek cooperation from Montana State University on this project if time lines and goals can be coordinated.

Funding is contingent on the district's ability to secure all required additional funds and DNRC's approval of the scope of work and budget. No funding will be provided for the installation of the proposed experimental ditch lining material until the currently funded testing project has been completed and shows that the application of these materials under the Stillwater Conservation District's proposal would be feasible and cost effective. If the district selects a ditch lining material other than the proposed demonstration material, funding would be limited to 25 percent of the estimated total cost.

---

Project No.: RRD-10

APPLICANT NAME: Town of Three Forks

PROJECT/ACTIVITY NAME: Three Forks Water System Improvements

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 299,000 - Community Development Block Grant  
\$ 1,000 - Town of Three Forks

TOTAL PROJECT COST: \$ 400,000

PROJECT DESCRIPTION:

The Town of Three Forks currently depends upon groundwater as its source of supply for the municipal water system. The town uses four wells, which extract water from two distinct aquifers. Three of the wells (numbers 4, 5, and 6) are located in an aquifer influenced by the Jefferson River, and the fourth (Connors well) is influenced by the Madison River drainage.



The Conners well is the largest producing well (270 gpm), but because of high arsenic concentrations (0.09 mg/l), its use should be limited to prevent arsenic of unacceptable limits from being delivered to the users. Use of the Conners well becomes especially critical in the high-use summer months. At present, there is no method of managing the flow from Conners well to ensure arsenic levels are not exceeded in the water delivered to the users.

To reduce the level of arsenic to acceptable levels, the town proposes to drill an additional well to supplement its supply, repair the water line from the Conner's well to the storage reservoir, install controls to regulate pump operation to ensure a blend of water of acceptable arsenic concentrations, and install flow monitoring equipment.

#### TECHNICAL FEASIBILITY:

The technical feasibility of this project was questioned by two well-qualified agency reviewers. The applicant proposes drilling another deep well in the tertiary deposits of the Jefferson River drainage; this proposal responds to past recommendations by the Department of Health and Environmental Sciences that indicate shallow sources in the Jefferson River drainage would require expensive treatment to remove manganese and iron and that water from the Madison River drainage aquifer is high in arsenic.

In review, the Water Quality Bureau cautions that there is a good possibility that the maximum concentration level for arsenic will be lowered by EPA. This action would effectively eliminate use of Connors well except under extremely restricted conditions. The combined production of these wells would fall short of the town's needs. The Water Quality Bureau recommends that another alternative be considered since the bureau is not likely to approve the proposed plan.

The Three Forks water supply project should be revised to require an assessment of both a reverse-osmosis system to treat water from the Conner well and use and treatment of shallow groundwater from the Jefferson River drainage. This alternative was suggested by the Water Quality Bureau.

#### FINANCIAL ASSESSMENT:

The project is budgeted at \$400,000. To meet this amount, the applicant is requesting a \$100,000 grant from DNRC and a \$299,000 grant from the Community Development Block Grant program. Three Forks plans to provide \$1,000 of its own. Grant funds would be used to pay for \$1,250 in administrative costs; \$11,383 for professional and related costs; \$81,707 for construction and contingencies; and \$5,660 for inflation.

This budget could be significantly altered if treatment of the Conner well and/or drilling of a shallow well in the Jefferson aquifer were the selected alternative as a solution to this problem. Due to the need and urgency of this problem and the amount budgeted for a solution, the town should consider making a larger contribution than the \$1,000 it is proposing. The town should consider raising water rates as a source of additional funds.

The Department of Commerce indicates that the Town of Three Forks will be making application for a Community Development Block Grant program.



ENVIRONMENTAL NOTE:

The project would have some negative short-term environmental impacts during construction. These impacts should be minor and would be more than offset by the resultant positive effects of water and energy (electrical) conservation.

The drilling of a new well and/or construction of a treatment facility will require careful placement to minimize impacts to the environment. Applicable water right permits will need to be obtained by the town.

The need and urgency of this project are great as it appears that users of the water system are drinking water with arsenic levels in excess of the EPA drinking water standards.

RECOMMENDATION:

DNRC recommends a grant for 25 percent of project cost up to \$100,000. The proposed solution to problem does not appear practical; however, due to the urgency of the problem, a solution needs to be developed. The DNRC grant is therefore conditioned upon Water Quality Bureau approval of the proposed solution.

---

Project No.: RRD-11

APPLICANT NAME: Butte-Silver Bow Government

PROJECT/ACTIVITY NAME: Blacktail Creek Restoration Project

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS:

\$	1,076	- Butte/Silver Bow (in-kind)
\$	5,000	- Butte/Silver Bow
\$	5,000	- Trout Unlimited
\$	5,000	- ARCO Coal (tentative)
\$	2,000	- Department of Fish, Wildlife and Parks

TOTAL PROJECT COST: \$ 118,076

PROJECT DESCRIPTION:

This project will restore a 6,000-foot section of Blacktail Creek. It has community support and if successfully completed will provide an aesthetic and recreational resource of great value to the local community. Restoration will occur on the stream reach from Harrison Avenue west to its confluence with Silver Bow Creek near Montana Street, parallel with Interstate 15.

Earlier channelization projects and current livestock grazing practices have damaged the riparian zone and have diminished fish habitat. The project proposes to use in-channel improvements including current deflectors, bank armor, and re-vegetation and fencing improvements to stabilize the channel and return the stream to a more natural productive status. More specifically, stream sinuosity will be restored by constructing a series of riffles and pools, and by repairing and replacing riparian vegetation. Sedimentation problems will be resolved by narrowing the streambed to increase flow velocity. Construction of boulder weirs and planting over-hanging cover will help improve the trout fishery. And a natural stream-side recreational area parallel to the creek with a walkway for public access will be established.

#### TECHNICAL ASSESSMENT:

Blacktail Creek's channel is alluvial and developed in sandy material derived from Boulder batholith intrusives. Sandy bed material is evident throughout much of the project area. In the furthest downstream project reach, the combination of channelization and dredging in the sandy alluvium of Blacktail Creek has created a wide shallow channel with little pool-riffle relief. Upstream reaches meander and have a better defined channel with greater stability but some bank erosion problems.

The proposed remedial measures are well proven in use on similar streams. The existing channel geometry and water-sediment regime are the result of both large-scale channel modification and more recent local pressures from urban storm run-off and grazing. The relationship between these has not been defined. Whether current channel erosion and excessive sediment load problems are the result of channel response to past channelization and dredging or to urban storm run-off laden with sediment is unclear. These distinctions need to be made before developing a solution. The source(s) of city storm sewer effluent, entering the project area, has not been positively identified. The city will need to place oil and sediment traps in the storm sewer system to establish baseline water quality information.

The application does not provide sufficient information to evaluate how effective the project will be. Some information contained in the applicant's design of in-channel improvement structures appears to be contradictory and may be based on an incorrect conceptual model of channel processes. These shortcomings may be resolved through a more complete design study. A hydraulic-geomorphic analysis should be conducted as a basis for developing design parameters for stable channel geometry and selecting appropriate in-channel treatments.

Easements for livestock exclusions, riparian improvements, and public access have not been secured from adjacent landowners.

#### FINANCIAL ASSESSMENT:

Total project costs are estimated at \$118,076 of which \$100,000 would be covered by this grant. Of the \$100,000 in DNRC funding, \$2,076 would be used for administration; \$12,000 would pay salaries for the project engineer; \$76,749 would be used for construction including instream rock or log deflectors, shrub bank plantings, rock rip-rap, debris removal and bank shaping, wildlife pond

construction, herbaceous vegetation seeding, rail and barbed wire fence installation, and pathway construction; and \$9,175 would be held for contingencies.

It is difficult to determine if sufficient funds are requested to complete all of the work proposed.

ENVIRONMENTAL NOTE:

If designed and constructed properly, this project should improve river bank stability and fishery habitat and provide public recreational access.

RECOMMENDATIONS:

A grant of up to \$100,000 is recommended contingent upon Butte securing the remainder of the project funding to complete the project and on DNRC approval of the project scope of work and budget.

---

Project No.: RRD-12

APPLICANT NAME: Broadwater Conservation District

PROJECT/ACTIVITY NAME: Irrigation Water Management Demonstration Project

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 100,000

PROJECT DESCRIPTION:

The Broadwater Conservation District, in cooperation with the National Center for Appropriate Technology, proposes to develop a pilot demonstration irrigation water management project. The purpose of the project is to improve the economics and environmental compatibility of irrigated agricultural operations through irrigation scheduling. Participants can expect an improvement in crop yields and reductions in fertilizer, pesticide, and energy use. The water management demonstration system would include four major components:

1. Irrigator education and information
2. Energy and water distribution audits of irrigation systems in the project
3. Soil moisture measurement and monitoring
4. Computer scheduling of irrigation applications



An AgriMet weather station and U.S. Bureau of Reclamation computer facilities will be employed to produce weekly estimates of crop water demand. This information will be combined with soil and crop type data to develop irrigation schedules for 30 fields. Staff from the National Center for Appropriate Technology (NCAT) will conduct water and energy system audits, monitor soil moisture in the participating fields, develop and disseminate irrigation schedules, assist users in the application of those schedules, and evaluate the results of the project and its applicability elsewhere in the region and state. The project is expected to be carried out over three years.

#### TECHNICAL ASSESSMENT:

The project is to be conducted in the Missouri River basin above Canyon Ferry reservoir and will directly affect water and energy use on up to 3,000 acres of irrigated land. This project will develop region-specific crop water demand and scheduling information needed to expand the use of this water management system elsewhere in the county and perhaps the state. Potential cost savings to the operator could be great because some fields in the study area are irrigated by water that is pumped twice between the source and the field.

The project proposal takes a sound approach to improving resource-use efficiency by demonstrating that on-farm water management improvements increase the financial viability of an irrigation operation. The technical methods proposed are similar to those used successfully in Idaho, Washington, Oregon, and western Montana.

#### FINANCIAL ASSESSMENT:

Total project cost is estimated at \$100,000, all to be paid from grant funds. About \$5,700 would be used to hire a one-tenth time project manager and \$2,000 would be used by Broadwater Conservation District to cover project administration. Almost \$63,000 would be used to cover the costs of a project engineer, field assistant, and irrigation specialist, who will be hired as NCAT employees to work part-time on this project. Remaining budget items include \$8,600 for travel; \$4,700 for purchase of soil moisture monitoring equipment, and \$16,000 to contract with the Bureau of Reclamation for purchase, installation, and maintenance of the AgriMet station.

#### ENVIRONMENTAL NOTE:

Installation of the AgriMet station will result in a very minor environmental disturbance. To the extent that the project conserves water, there will be a positive impact on the environment by decreasing agricultural chemical inputs to groundwater and reducing diversions for irrigation, which will help dilute arsenic concentrations in the Missouri River.

#### RECOMMENDATIONS:

DNRC encourages the project sponsors to minimize the area of participant field distribution so data collected by the single AgriMet station will apply accurately to all project fields. The final project report should compare crop yields, input costs, and water use for representative fields in the study area, before and during the project.



DNRC recommends a grant in the amount of \$100,000 contingent upon approval of the scope of work and budget.

---

Project No.: RRD-13

APPLICANT NAME: Fallon County

PROJECT/ACTIVITY NAME: Baker Lake Erosion Control and Recreation Path

AMOUNT REQUESTED: \$ 15,361

OTHER FUNDING SOURCES AND AMOUNTS: \$ 17,366 - Fallon County

TOTAL PROJECT COSTS: \$ 32,727

PROJECT DESCRIPTION:

Baker Lake dam was constructed in the early 1900s. The State of Montana constructed Highway No. 7 over the dam in the 1930s. In 1975, Fallon County purchased a portion of the area around Baker Lake and in 1981, obtained a recreation easement from the City of Baker for the remaining portion of the area. Since 1983, improvements to the area include a park with playground equipment and picnic shelters, a softball complex, paving of the county road around the lake, and a gravel walking path. Fallon County is applying for grant funds to prevent further erosion of Baker Lake dam face and to provide a safe, all-weather asphalt pedestrian/bicycle pathway around the Baker Lake recreation area.

Despite the improvements made to date, most of the shoreline of Baker Lake is still not accessible to pedestrians and bicyclists. Several areas require pedestrian or cyclist traffic to use the shoulder or roadway of streets, county roads, and the state highway. This creates dangerous situations, especially during late evening hours when people tend to walk and bicycle around the lake. Existing gravel paths allow fair-weather use only.

The face of Baker Lake dam and portions of the shoreline are susceptible to erosion from wind and water. The dam face and portions of the shoreline are eroded and need repair.

Fallon County requests funds to construct a 8,569-foot, all-weather, asphalt pedestrian/bicycle path around part of the lake to provide safe travel and better access to Baker Lake. Further erosion will be prevented by rip-rapping the dam face and the shoreline where needed with rock; the rip-rap will provide a base for the path where the path crosses it.

TECHNICAL ASSESSMENT:

Preliminary designs include using washed, clean 6- inch to 12-inch diameter rock from a source in Fallon County for the rock rip-rap and wet area fill material. Rock will be deposited (1) along a 592-foot section of the dam face

to fill the eroded area to 2 feet above the high water level, (2) along a 277-foot section of Sixth Street East for path base and shoreline protection, and (3) at 200 feet of wet area along the path route as a base for the path. The 4-foot wide path will be constructed on top of the rock as a 3-inch gravel base with a 4-inch asphalt overlay. The path, along the route where rock is not required will be constructed of 4 inches of asphalt over a 2 to 3-inch gravel base. The asphalt will be sealed with oil and coated with sand. The county owns or has easements for all but the first 368 feet of the path route. An easement for this portion will be obtained before construction begins. Estimated construction time is 25 days.

One erosion prevention alternative would have involved filling the eroded dam face with soil and re-establishing vegetation. But high winds causing excessive wave action would erode the fill, thus this approach would not be applicable at the Baker Lake site. The county also considered both gravel or concrete as possible materials for pathway construction but a gravel pathway would not be useable in all weather conditions and concrete is not well suited for the soil type.

The Fallon County surveyor will prepare the final design and inspect the construction of the project. The Soil Conservation Service provided general assurances that the planned rip-rap would be useful in mitigating soil erosion even though the a 2 to 1 back slope exists at the project site. Specific review of the conditions at the Baker Lake site has not occurred, so final designs will be reviewed by DNRC with input from the Soil Conservation Service. Project administration duties will be performed by the Fallon County planner.

#### FINANCIAL ASSESSMENT:

The total project cost is \$32,727. Fallon County will provide \$17,366: \$4,269 in salaries and benefits, \$11,907 for materials, and \$1,190 for contingencies. Grant funds would pay for \$13,965 in contracted labor and equipment and \$1,396 in contingency costs, totaling \$15,361. The county will transport all materials, except the clean rock, to the project site, apply the oil seal and sand, and mix the asphalt. These costs were not incorporated into the budget. Although they don't appear excessive, no explanation is given of how the contract labor and equipment costs for laying the gravel base and asphalt were derived.

The county reserves the right to reject bids above the engineer's estimate and use the grant funds to complete the project with county personnel and rented equipment. Small equipment (Bobcat loader) not owned by the county is needed to work in wet and confined areas at the project site.

#### ENVIRONMENTAL NOTE:

Positive environmental impacts will be prevention of soil erosion on the dam face and shoreline. Minimal negative impacts to wildlife and shoreline vegetation may occur due to increased access to the shoreline and covering of vegetation and habitat by the path.

RECOMMENDATIONS:

DNRC recommends a grant of \$15,361 contingent on prior determination by DNRC that corrective measures required under the Montana Dam Safety Act to bring Baker Lake dam up to safety standards will not later adversely affect the riprap and/or path when they are implemented and assurance that all county funding is committed and or available. The project will finally be contingent on DNRC approval of the scope of work, budget, and final design.

---

Project No.: RRD-14

APPLICANT NAME: Local Government Center - Montana State University

PROJECT/ACTIVITY NAME: Solid Waste Information and Assistance Center

AMOUNT REQUESTED: \$ 99,360

OTHER FUNDING SOURCES AND AMOUNTS: \$ 39,000 - Local Government Center and  
Northwest Area Foundation

TOTAL PROJECT COST: \$ 138,360

PROJECT DESCRIPTION:

The cost of operating solid waste landfills will jump dramatically when the U.S. Environmental Protection Agency's "Subtitle D" regulation becomes effective in late 1990. These standards will set minimum national criteria for locating, designing, operating, clean-up, and closure of new and existing municipal landfills. Local governments will have 18 months after the effective date of these regulations to comply. Some authorities estimate that the cost of establishing new landfills could jump ten-fold or more because of the new requirements.

The Local Government Center at Montana State University is seeking funding for a Solid Waste Information and Assistance Center to help Montana communities develop programs of waste reduction, reuse, recycling, and composting. These efforts would be aimed at reducing the volume of trash that would otherwise find its way to a landfill, thereby extending the life of existing landfills and decreasing the need to establish new facilities. The goals of the project are to increase citizen knowledge of integrated solid waste management, decrease the amount of waste that communities send to local landfills, improve the effectiveness of communities in selecting private contractors, and improve overall efficiency in the operation of local solid waste management programs.

The project would be carried out in four broad phases:

Phase I - Center Start-up. This phase would include contacting appropriate state offices for regulatory information, private recyclers regarding potential services and markets for recyclables, and private haulers for services and costs.



Cities, towns, and counties will also be surveyed regarding the nature of solid waste issues they face, and states and cities outside Montana will be assessed for programs with potential for application in Montana.

Phase II - Develop Educational Materials and a hotline. The public informational materials will focus on integrated waste management, including recycling. A hotline will be established to answer questions or solve problems. Consultation services will also be available for conflict resolution, short-range and long-range solid waste planning, public/private venture pairing, and contracting.

Phase III - Professional Development. Four workshops will be developed and conducted to provide guidance to local communities on issues identified in Phases I and II as being of state-wide and area concern.

Phase IV - Community Pairing. The final phase will concentrate on developing and publishing model program descriptions, assisting communities in public/private ventures and inter-local agreements, encouraging new uses for recycled products, and working with Montana companies on efficient packaging for waste reduction. Future funding for the Center will also be developed.

The grant will be administered by the Local Government Center, a unit of the Cooperative Extension Service. The project will take two years.

#### TECHNICAL ASSESSMENT:

The proposed project will provide timely, badly needed technical assistance to local communities in reducing their reliance on landfills as the sole means of solid waste disposal. Two aspects of this assistance could be particularly valuable. The first is one-on-one consulting services for local governments and task forces to deal with problems that are unique to their situation. Many communities simply don't know how to go about formulating a plan for alternative means of waste disposal. The second is to help local communities identify markets for recyclable products. Other groups in Montana may provide some of these services to Montana communities. Later in 1990, the Midwest Assistance Program intends to issue a step-by-step guide to setting-up a community recycling program. It will also participate in several workshops aimed at educating community leaders on integrated waste management programs. Keep Montana Clean and Beautiful, an organization funded by the soft drink industry, also assists communities in setting up recycling programs. Neither effort should be considered duplicative of the Local Government Center proposal, since neither organization has the staff to cover even a major portion of the state. The fact that other organizations are engaged in similar activities underlines the need for coordination between the three organizations.

In summary, the project should help reduce the volume of wastes entering Montana landfills, though probably not by the 25 percent identified as a goal in the proposal.

#### FINANCIAL ASSESSMENT:

Total project costs are estimated at \$138,360. This grant would cover \$99,360. Approximately 70 percent of the grant would be used to cover personnel costs over the two year project period. Grant funds would be used for a full-



time project director at \$52,000, a graduate research assistant for \$5,000 for 10 months, and \$13,000 in associated benefits. The remaining 30 percent of the grant money would cover communications costs of \$3,000, public education materials production costs of \$5,000, in-state travel costs of \$6,000, out-of-state conference attendance costs of \$4,000, workshop costs of \$4,000, and \$7,360 in university indirect costs.

Contributions from the Local Government Center and the Northwest Area Foundation include \$7,000 for part-time secretarial support, \$22,000 for office rent, \$2,000 for computing services, \$3,000 for communications, and \$5,000 for materials production.

Whether the staff resources allocated for this project will be sufficient to complete the identified work is questionable. If some of the work must be curtailed, the project sponsor should concentrate on the community outreach and networking aspects of the project, including the hotline and consultation services.

ENVIRONMENTAL NOTE:

No direct environmental impact will result from an education program.

RECOMMENDATIONS:

A grant of \$88,000 is recommended contingent on DNRC approval of the scope of work and budget. The recommended grant amount is the requested grant less indirect and out-of-state conference costs.

---

Project No.: RRD-15

APPLICANT NAME: Department of Natural Resources and Conservation, Water Management Bureau

PROJECT/ACTIVITY NAME: Beaverhead County - Groundwater Study

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 223,200 - U.S. Bureau of Reclamation  
\$ 25,785 - East Bench Irr. Dist.  
\$ 50,000 - Montana Power Company  
\$ 58,850 - DNRC (in-kind)

TOTAL PROJECT COST: \$ 457,835

PROJECT DESCRIPTION:

The Water Management Bureau proposes to study groundwater yields and interaction with surface water in Beaverhead County. The proposed 100 square mile area of study includes the alluvial fans and floodplains along Rattlesnake Creek west and southwest of Dillon and Blacktail Deer Creek drainage south of Dillon. Both are tributaries of the Beaverhead River. Rattlesnake Creek joins

the Beaverhead approximately 23 river miles below Clark Canyon Dam and Blacktail Deer Creek joins in about 30 miles below the dam. Both drainages contribute substantial volumes of flow to the main-stem of the Beaverhead, which in turn is a major source of water for area agricultural users and supplies hydropower facilities further downstream on the Missouri. In addition, the Beaverhead supports a renowned sport fishery composed mainly of brown trout.

Both drainages have been the subject of considerable groundwater development over the past several decades. In the Blacktail Deer Creek drainage most of this development took place before 1973, while most of the groundwater development in Rattlesnake Creek has taken place since 1973.

Continuing efforts to further develop groundwater in these drainages are generating conflict. Existing groundwater users are becoming increasingly concerned about the sustainability of the areas' groundwater production. Because streamflow is partly maintained by groundwater discharge, surface water users are concerned that withdrawals from aquifers in the two drainages are contributing to diminished streamflow in the Beaverhead River. To compensate, larger releases from Clark Canyon Reservoir are required to satisfy downstream demands. Several years of significantly below normal precipitation have heightened these concerns. Indeed, groundwater level data collected since 1982 from 17 irrigation wells in the Blacktail Deer Creek drainage shows a distinct downward trend.

DNRC's Water Management Bureau is responsible for establishing the technical basis for groundwater use permitting and special management area designation decisions by DNRC and the Board of Natural Resources, respectively. The objective of this project is to develop an accurate groundwater computer model to quantify the sustainable yield of these aquifers and to assess surface water/groundwater interactions. The results of the modeling effort will be combined with interpretations of field data to develop a groundwater management strategy for the aquifers which will help with management decisions by DNRC.

Two years and two months will be required to complete the project.

#### TECHNICAL ASSESSMENT:

Past groundwater studies in the region have been only site-specific and superficial in nature. One of the expected results of this study includes a much more detailed understanding of the groundwater system than is now available. The information will allow DNRC to estimate the volume of water in storage in the aquifer and the rates and general locations of aquifer recharge and discharge.

Another result would be the establishment of a long-term monitoring network for both groundwater and surface water. Thirty-seven new observation wells will be added to the 17 irrigation wells already monitored, and two gauging stations will be constructed to continuously monitor stream discharges in Rattlesnake and Blacktail Deer creeks. The East Bench Irrigation District and DNRC will assume responsibility for maintaining the monitoring network after this project is completed.

A third result of the study is a computer model that could be used to evaluate the affect of existing and proposed future withdrawals on groundwater/surface water interactions and to determine the safe yield of the aquifer. The model is intended to be precise enough to predict not only the cumulative impact of many developments on a regional scale but also the incremental impacts of large individual projects such as those for new irrigation.

The results of this effort could translate into on-the-ground management actions in several ways. First, the modeling results could be used as evidence in contested case water use permit hearings to establish whether proposed appropriations would adversely impact existing users or whether there is sufficient water in the source of supply to support the appropriation. Modeling results could also be used to evaluate the need for and if necessary, to establish a controlled groundwater area. A controlled groundwater area is a special management area established by the Board of Natural Resources and Conservation to address existing or impending problems with groundwater supply or quality. Finally, a possible but less likely outcome is that the modeling results could act as a catalyst to facilitate cooperation among local users in managing their demands on the aquifer.

#### FINANCIAL ASSESSMENT:

Total project costs are estimated at \$457,835. The U.S. Bureau of Reclamation will contribute \$223,200 to this effort through a combination of technical in-kind services and cash contributions. Montana Power Company, the owner of several large hydropower facilities further downstream on the Missouri River, will contribute \$50,000 in funding. The East Bench Irrigation District will also contribute \$25,785, almost all as in-kind services for data collection and equipment installation. Finally, DNRC's Water Management Bureau will contribute \$58,850 in in-kind services. This mix of funding represents a unique cooperative effort among state, federal, local, and private entities and from that perspective should be considered cost effective.

Grant money would be spent as follows: project administration by DNRC (\$3,000); water chemistry analyses (\$2,850); aquifer testing (\$6,000); computer software and report preparation (\$2,100); monitoring well drilling and seismic refraction survey (\$70,250); stream gauging station construction (\$10,800), and contingencies (\$5,000).

The total costs for the project may appear high. The main factor is the high cost of the deep exploratory and monitoring well drilling, which together account for almost 45 percent of the total project cost.

#### ENVIRONMENTAL NOTE:

Installation and use of monitoring and exploratory wells will cause some land disturbance. If the installation of the wells is improper, groundwater quality degradation could also result. The seismic refraction survey will temporarily disturb some wildlife. For the most part, however, the project is a data collection, analysis, and interpretation effort and should result in no environmental impact. An improved understanding of the aquifer and its relationship to the region's surface water should result in improved resource management.



RECOMMENDATIONS:

DNRC recommends a grant of up to \$100,000 contingent on DNRC approval of the scope of work and budget. This funding is also contingent on the participation of the U.S. Bureau of Reclamation, East Bench Irrigation District, and Montana Power Company as outlined in the application.

---

Project No.: RRD-16

APPLICANT NAME: Fort Shaw Irrigation District

PROJECT/ACTIVITY NAME: Rehabilitation and Betterment Study

AMOUNT REQUESTED: \$ 50,000

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 50,000

PROJECT DESCRIPTION:

The Fort Shaw Irrigation District requests funding for a Rehabilitation and Betterment Study of the irrigation district. The study will be conducted by the U.S. Bureau of Reclamation and the U.S. Fish and Wildlife Service (USFWS). The Rehabilitation and Betterment Study will assess the condition of the district's irrigation system and identify areas in need of improvement or replacement. Specifically, the Bureau of Reclamation portion will consist of a farm budget study, an engineering cost study, and an environmental assessment. The USFWS will conduct a wetlands protection/mitigation study.

The district anticipates that a \$700,000 interest-free loan will be authorized by Congress for improvements to specified water works of the district. However, the Rehabilitation and Betterment Study must be conducted and completed before the request for the interest-free loan can be made.

TECHNICAL ASSESSMENT:

The application stated that the study must be conducted before the Bureau of Reclamation will request and Congress authorize the \$700,000 interest-free loan to the district. Fort Shaw Irrigation District has, however, submitted another grant application to DNRC for a \$100,000 grant to rehabilitate a major diversion from the Sun River and to install a large (80 cfs) diversion pipe. Total estimated cost for this construction is \$800,000.

FINANCIAL ASSESSMENT:

The Bureau of Reclamation provided the following consulting cost estimates to the district for the various components of the Rehabilitation and Betterment Study:



Farm Budget Study (Bureau of Reclamation)	\$15,000
Engineering Cost Study (Bureau of Reclamation)	\$15,000
Environmental Assessment (Bureau of Reclamation)	\$ 5,000
Wetlands Assessment (USFWS)	<u>\$15,000</u>
Total	<u>\$50,000</u>

#### ENVIRONMENTAL ASSESSMENT:

This study will result in no environmental impacts.

#### RECOMMENDATIONS:

A grant of \$50,000 is recommended contingent on DNRC approval of the project scope of work and budget; this study shall be complete before grant funds for rehabilitation of the headworks and "A" system diversion are requested.

Project No.: RRD-17

APPLICANT NAME: Darby School District No. 9

PROJECT/ACTIVITY NAME: Darby School Park Project

AMOUNT REQUESTED: \$ 25,300

OTHER FUNDING SOURCES AND AMOUNTS:

\$	1,800	- Soil Conservation Service
\$	6,100	- Trapper Creek Job Corps
\$	6,481	- Darby School
\$	9,190	- Darby School (in-kind)

TOTAL PROJECT COST: \$ 48,871

#### PROJECT DESCRIPTION:

The Darby School District requests funding to assist in the creation of a multiple purpose park on 6.5 acres of land between the elementary school and the high school. The park will be open to the public, but will be primarily for the benefit of the school system which has an enrollment of 545 students.

The proposed park will be designed for several specific purposes. A large area will be developed and used as an outdoor classroom for natural resource and science education. Existing playground and recreation areas will be maintained for grade and middle school students. Another area will be developed as a physical education area and playground for handicapped students; 51 currently enrolled handicapped students have special needs related to the playground equipment provided for them. Physical education students will use another area of the park as an outdoor exercise area designed to supplement existing indoor physical education.

The remaining land will become a general park area, with grass, trees, and shrubs. An irrigation system will be installed and picnic tables and benches placed around the park.

#### TECHNICAL ASSESSMENT:

The goals and objectives of the project are clearly stated. Several distinct user groups will be accommodated through the park's design. Outdoor classrooms have been very successful in some areas and, if interest is developed among teachers, students, and the community, such a program could have long-term benefits. The project should be an asset to the entire community. The school district has made commitments for on-going maintenance of the park.

The school district has been and will continue to seek advice and assistance from governmental agencies including the Soil Conservation Service, the Extension Service, and Jobs Corps in the design of irrigation systems, plant species selection, and playground equipment design.

#### FINANCIAL ASSESSMENT:

The project budget has been thoroughly considered and thoughtfully prepared. The school district has recently purchased \$6,000 of topsoil available because of reconstruction of Highway 93. Where possible, the project will make the best use of dollar allocations using in-kind services, Trapper Creek Job Corps, and consulting services from government agencies to limit the cost of the endeavor. The amount requested appears to be adequate to complete the proposed project.

Total project costs are estimated at \$48,871, of which \$25,300 will be covered by this grant. Materials, equipment, and contractor costs would be paid for with \$23,000 in grant money; these funds would be used to install the irrigation system, grade the park area, apply topsoil, and construct a walkway around the outside classroom area. Remaining grant funds would be used for contingency costs.

#### ENVIRONMENTAL NOTE:

All environmental impacts as a result of this project should be positive.

#### RECOMMENDATIONS:

A grant of \$25,300 is recommended contingent on DNRC approval of the project scope of work and budget.

Project No.: RRD-18

APPLICANT NAME: Liberty County Conservation District

PROJECT/ACTIVITY NAME: The Sweetgrass Hills East Butte Groundwater Study.

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 50,000 - Liberty County Conservation District, Sweetgrass Hills Protective Association, and local residents.

TOTAL PROJECT COST: \$ 150,000

PROJECT DESCRIPTION:

Liberty County Conservation District is spearheading a local initiative to conduct a baseline assessment of groundwater resources in an eight township area south of East Butte in the Sweetgrass Hills of northcentral Liberty County. The project will provide a database sufficient to detect changes in aquifer water quality and yield due to impacts by future agricultural, mining, and other developments and to facilitate planning on the long-term use of the aquifer. Although the proposal refers to other types of hydrogeologic data such as groundwater quantity and flow direction, the project study plan is directed primarily toward a reconnaissance-level survey of water quality. The target of the investigation is referred to as the "Sweetgrass aquifer," a major source of agricultural, domestic, and stock water in this region.

The district is concerned about the aquifer because it believes the quality of water in the aquifer has deteriorated over the last several decades. Agricultural practices and oil and gas production are suspected causes. The district is also concerned about the impact that future mining activities proposed for the Sweetgrass Hills could have on aquifer water quality and yield.

The project will be carried out under the supervision of a working committee whose composition will be established during the initial phase of the study. A consulting hydrologist or graduate student will be hired to design and conduct the study. Volunteers will be used to help collect water quality samples and perform other technician-level tasks. The project is expected to take two years.

TECHNICAL ASSESSMENT:

The Sweetgrass aquifer mentioned in the proposal apparently corresponds to the two principal shallow aquifers that produce most of the groundwater used in the project area. The first is a series of glacial outwash channels that braid throughout the area, while the second is a porous bedrock aquifer that covers most of the region.



The project will produce a database useful for the general evaluation of water quality trends in the aquifers and help identify any impacts on water quality caused by future developments. Localized water quality problems may be identified through site-specific sampling efforts, and some information on aquifer water levels, spring discharge volumes, and streamflows will also be collected. This information will help provide a basis for detecting significant changes in aquifer storage volumes and flow. The project will not result in a complete description of these shallow aquifers because information on the transmissive, storage, and geometric properties of the aquifers themselves will not be generated, and aquifer recharge and discharge will not be located or quantified.

Along with mineral development, the applicant identifies agricultural land use and saline seep as water quality management problems within the project study area. Since the role of local governments in mineral development is constrained by law, the district's principal opportunity to influence mining development will be through comments submitted to the Hard Rock Mine permitting process administered by the Montana Department of State Lands. Management to reduce saline seeps may be more consistent with the role of the district since specific management actions could be initiated by the district if serious salination problems are identified by the study.

The inventory data generated by this study will be used to help predict and measure the water quality impacts of any mineral development within the project study area. Proper sampling procedures must be followed to ensure credible data. The district and its consultant will need to discuss acceptable sampling procedures with the USGS or another knowledgeable source. Producing credible samples with the help of volunteer samplers may be difficult, but is not impossible.

The proposed study is limited in scope but will provide useful information if the samples for two aquifer systems in the project study area are analyzed separately. Much depends on the capabilities of the consultant selected.

#### FINANCIAL ASSESSMENT:

The requested grant of \$100,000 would be used to cover about two-thirds of the total cost of the project. Of the funds requested, \$20,000 would be used to employ a hydrologist, \$2,000 for a sampler, \$8,000 for sampling, \$45,000 for analysis, \$3,000 for project administration by the district, \$7,000 for project research, \$3,600 for a project contingency account, \$1,400 for travel, \$5,000 for communications, and \$5,000 for sampling equipment. The analysis costs are based on costs of \$90-\$100 per sample for 450 samples. This cost may be somewhat low if many samples are analyzed for pesticides; analytical costs for these parameters often range from \$200-\$300 per sample.

The remaining \$50,000 in project costs will be provided as in-kind services by the district, local residents, and the Sweetgrass Hills Protective Association. These contributions will be for contract administrative costs (office rent, utilities, telephone, travel, printing, and planning) and water quality sampling by volunteers.



ENVIRONMENTAL NOTE:

Since the project is largely a data collection effort, no adverse environmental impacts should result.

RECOMMENDATIONS:

DNRC recommends a grant of up to \$100,000 contingent on the approval of project scope of work and budget. All data generated by the project must be incorporated into the Montana Bureau of Mining and Geology groundwater information center data base.

---

Project No.: RRD-19

APPLICANT NAME: Missoula County Conservation District

PROJECT/ACTIVITY NAME: Irrigation Diversion Alternatives on Dynamic River Systems

AMOUNT REQUESTED: \$ 85,250

OTHER FUNDING SOURCES AND AMOUNTS: \$ 92,000

TOTAL PROJECT COST: \$ 177,250

PROJECT DESCRIPTION:

The Missoula County Conservation District is seeking a grant to develop alternative methods for the diversion of irrigation waters from the Clark Fork River near Missoula. Six irrigation diversions on the Clark Fork River in Missoula County serve a total of 10,046 acres of agricultural land.

The objectives of this project are to develop options for irrigation water diversions that are economically feasible, environmentally sound, and may have the ability to enhance river-front development and recreational opportunities. It is believed that the options developed as a result of this project would also be applicable to diversion needs in other parts of the state.

Once DNRC grant funding is received for the project, the district will solicit a Request for Proposals from qualified engineers and attorneys to provide services to develop alternative means of diversion of irrigation water. Development of alternatives and the selection of the desired alternative is scheduled for completion in the spring of 1992, with final engineering construction plans to be completed by the fall of 1992. Construction will occur in 1993.

Three of the six diversions are located within the Missoula city limits. These diversions concern residents of Missoula and in particular the Missoula Redevelopment Agency working with others on the Missoula Riverfront Development Program.

#### TECHNICAL FEASIBILITY:

The ability to adequately divert irrigation water usually results in an annual repair and/or rebuilding project that involves construction in the stream. Many diversions are old and in need of constant repair. Gravel diversions, like those in Missoula, are rapidly becoming unacceptable because they are prone to seasonal washout and cause stream sediment problems.

The purpose of this project is to engineer diversions that will overcome unacceptable diversion practices. A second but equal purpose is to develop these alternatives within the framework of the on-going Missoula river-front development project.

The Missoula County Conservation District administers the Natural Streambed & Land Preservation Act, known as the 310 law. Each year the district receives applications from several irrigation companies to work on their diversions. The majority of these applications involve using large equipment to build gravel dikes. Due to the urban locations of three of these diversions on the Clark Fork, the district struggles each year to allow this activity. A number of complaints are received each time equipment enters the Clark Fork to work on these diversions. Continued public discontent and increased regulation of activities in the stream restrict the district's options.

The development of alternative diversions seems feasible and very desirable. The project has been endorsed by the Missoula County Commissioners and the Mayor of Missoula through letters included with the grant application. The project is also supported by the Montana Department of Fish, Wildlife and Parks.

The Soil Conservation Service is currently sponsoring a task group to consolidate ideas on ways to build economical and environmentally sound diversions. Its objective is to develop sound means of diverting irrigation waters on various Montana waters. The efforts of the Missoula County Conservation District on the Clark Fork River should be closely coordinated with the SCS and this task group to prevent duplication of effort.

#### FINANCIAL ASSESSMENT:

The Missoula County Conservation District has worked with engineers, attorneys, and other consultants to develop estimates of cost for this project. The estimates developed resulted in a total project cost of \$177,250. A DNRC grant of \$85,250 is requested; the remaining \$92,000 to be obtained in the following manner:

\$50,000	-	Missoula Redevelopment Agency
\$20,000	-	SCS
\$ 5,000	-	Irrigation Companies
<u>\$17,000</u>	-	Missoula County
\$92,000	-	Total of other Funding Sources

Of the total cost, \$122,250 is proposed to be used for contract administration and professional/technical costs. The remaining \$55,000 is to be used for construction. The cost of construction cannot be accurately assessed at this time, but it is anticipated that it would be much more than the projected

\$55,000 and would therefore need to be supplemented. Also, the SCS has indicated that it will provide technical support to the extent its resources will allow. SCS resources are limited, but it will share the results of the diversion task group efforts.

ENVIRONMENTAL NOTE:

A design that accomplishes the goals of this proposal will benefit both the water users and the groups concerned with the environmental and aesthetic problems caused by current diversion methods. Implementation of the projected alternative will eliminate the annual influx of gravel and finer materials that cause channel changes, bank erosion, increased turbidity, and degradation of fisheries. It will eliminate for irrigators the work of building temporary dams that usually must be enlarged every year as the dams themselves force movement of river channels away from headgates.

RECOMMENDATION:

DNRC recommends a grant in the amount of \$85,250 for the study portion of this project subject to DNRC review and approval of scope of work and final budget. The amount of money budgeted for construction is probably insufficient. For this reason, the district should provide information in the study on how additional construction funds could be obtained.

---

Project No.: RRD-20

APPLICANT NAME: Outlook County Water and Sewer District

PROJECT/ACTIVITY NAME: Water Well Connection

AMOUNT REQUIRED: \$ 7,875

OTHER FUNDING SOURCES AND AMOUNTS: \$ 23,625 - Farmers Home Administration Loan

TOTAL PROJECT COST: \$ 31,500

PROJECT DESCRIPTION:

The Outlook County Water and Sewer District is applying for a DNRC grant to enable it to connect an existing well to its water system. Outlook is in the northeastern corner of the state. Currently, the town is served by two wells of limited production (8 gpm and 17 gpm) and poor quality. The water from these wells is extremely hard and high in iron content.

In 1989, the casing of one of the wells failed, necessitating the re-drilling and casing of the well. Outlook began a search for another source of groundwater. A new well was drilled to a depth of 220 feet. The new well produces 40 gpm and is of better quality than the existing wells. Thus, the new well is proposed for connection to the water system.



#### TECHNICAL ASSESSMENT:

Before 1983, Outlook relied on individual wells or hauled water for its water supply. Individual wells or hauled water were also used for individual septic tank/drainfield systems for sewage treatment and disposal.

During the oil resource development activity of the early 1980s, Outlook experienced problems with well construction and septic system failures. Because of these problems, the Outlook County Water and Sewer District was formed in 1983. Through a grant and loan from the FmHA, the district constructed the existing public water and sewer systems.

The quality and quantity of water from the two wells that serve as the supply is poor. Water is frequently rationed to ensure sufficient amounts for fire suppression, and because of high hardness and iron levels the water is treated through individual home softening units in order to make it acceptable for household use.

The district plans to obtain the new well from Outlook and will connect the well to the existing system. As a result, both the quantity and quality of the water will be improved. In order to connect the well to the existing water distribution system, approximately 880 feet of water main and a highway crossing will be installed, along with a pump and pump controls.

The project will take 9 months to complete from the time the grant verification is obtained.

The Water Quality Bureau questions whether the new well has been constructed to required standards and whether test pumping has been done to determine actual yield. Prior to connection of the new well to the water system, the Water Quality Bureau will need to approve the well's construction and yield.

#### FINANCIAL ASSESSMENT:

Cost estimates for the project have been provided by a consulting engineering firm. Since this project has repayment capacity, one-quarter of each cost item has been assigned to the DNRC grant. The district will assume the remaining three quarters costs and the only other funding source proposed to be used is a \$13,625 FmHA loan guarantee for a local bank loan.

Total project cost is estimated to be \$31,500. The district proposes to pay its \$23,625 share of the project cost with \$10,000 cash on hand in its FmHA loan reserve fund, and the remaining \$13,625 would be borrowed from a local bank with FmHA guaranteeing that loan. Grant funds would be used to pay \$50 for appraisal services; \$50 for bid advertisement; \$800 for a project engineer; \$6,427 for construction; and \$548 for contingency.

The district's current rate for water service includes a base rate of \$15 per month for the first 2,000 gallons and \$1 per 1000 gallons thereafter. FmHA suggests that \$7.50 per month be added to the base rate for five years to repay a \$15,000 loan. The amount to be borrowed could be less than \$15,000, but for the purposes of discussion, \$7.50 per month added to the base rate will result in a monthly rate of \$22.50 for water service, not an unreasonable rate. The



proposed rate should be acceptable to the residents of Outlook, since the new well will relieve problems of low water supplies and the need to maintain water softeners and iron removal equipment.

ENVIRONMENTAL NOTE:

This project should result in increased energy efficiency for pumping water. Any savings in energy efficiency may be offset however by increased use and water production. A softer water supply will reduce the need for household water softeners and conditioners essential for household use with the current water supply.

Adequate supplies during the summer months will improve fire control if fires occur. Fire danger is a serious concern with the current drought in this area.

RECOMMENDATION:

DNRC recommends a grant of \$7,875 for this project, contingent upon the Water Quality Bureau's review and approval of the engineering plans and specifications used for construction, test pumping yield results, and plans for connection of the well to the water system. The grant is also contingent upon DNRC approval of the scope of work and budget.

---

Project No.: RRD-21

APPLICANT NAME: City of Miles City

PROJECT/ACTIVITY NAME: Miles City Community Recycling Program

AMOUNT REQUESTED: \$ 96,513

OTHER FUNDING SOURCES AND AMOUNTS:

\$	1,200	-	City of Miles City
\$	19,095	-	Eastern Montana Industries
\$	3,800	-	Fundraising by local groups
\$	23,157	-	First year revenues

TOTAL PROJECT COST: \$ 143,765

PROJECT DESCRIPTION:

Metals such as aluminum, copper, and steel are the only materials currently recycled in Miles City. The city requests grant funds on behalf of Eastern Montana Industries, a non-profit workshop for handicapped persons, to expand its recycling capabilities to include cardboard, glass, and plastic. The project has broad-based community support in Miles City and will serve as a demonstration project for similar projects in other small to mid-size communities.

Grant funds are requested to purchase the machinery needed to recycle cardboard, plastic, and glass. Eastern Montana Industries will provide space, workers, and day-to-day administration for the recycling operation. The volume

of marginally profitable waste (cardboard, plastic, glass) generated in the Miles City area probably would not pay for the cost of purchasing machinery necessary to recycle it. However, if machinery was in place and paid for, profit from the salvaged waste would cover labor and transportation costs. Thus, it is assumed, the recycling operation will be financially self-sufficient once equipment is purchased and in place.

#### TECHNICAL ASSESSMENT:

The proposal indicates that grant funds will be used to purchase a solid waste horizontal baler with conveyor feed system, a multi-lift hydraulic system and container to be installed on a truck, a used forklift, a used one-ton truck, and to construct a loading dock. This equipment and dock will be used to collect recyclable plastic and cardboard, compact the material into large 1,000 pound bales, and load the bales onto trucks for transportation directly to mills. Since the baler will produce bales large enough to ship directly to mills, middle-man costs will be eliminated. The larger bales will also reduce labor costs. The forklift and dock will also be used to load crushed glass on trucks. Eastern Montana Industries will purchase the glass crusher with funds gathered through local citizen fundraisers. The equipment and dock will be installed at the Eastern Montana Industries building, and Eastern Montana Industries handicapped workers will provide the labor.

No indication is given of the potential volume of recyclable cardboard, plastic, and glass generated in the Miles City area. Nor is information given regarding current prices expected for the recyclable materials. Thus, it is unclear whether enough income can be generated to pay for operating costs. Eastern Montana Industries personnel indicate that no cost-benefit studies have been conducted to determine the volume or prices needed to pay for labor and transportation. No documentation of markets is given. No schedule is given for installation and implementation of the recycling project.

#### FINANCIAL ASSESSMENT:

The total cost of the project is \$143,765. The \$96,513 in grant funds requested would be used to purchase \$75,000 worth of equipment and to pay \$2,000 for equipment maintenance, \$5,000 for equipment freight and installation, \$7,500 for construction/structure acquisition costs, and \$6,213 for contingencies. First-year tentative projected revenues are expected to be \$23,157; these and other community funds will pay the remaining costs projects. Additional costs will include \$1,200 in administration and \$5,200 in associated costs, salaries and benefits of \$34,377, additional equipment purchases of \$3,800, and \$2,675 in contingencies.

The contact person has indicated that \$2,500 was left out of the equipment purchase cost estimate and will be paid from the 6 percent inflation contingency.

#### ENVIRONMENTAL NOTE:

The recycling expansion effort will reduce landfill use in the Miles City area which will be environmentally beneficial. Reuse of the cardboard and plastic will result in conservation of the natural resources (wood and oil) from which they are made.

RECOMMENDATIONS:

A grant of up to \$96,513 is conditionally recommended assuming DNRC approval of a scope of work based on more complete information to be provided by Miles City. The additional information in this analysis will include a determination of the volume of recyclable plastic, cardboard, and glass and the price needed to pay for labor and transportation costs for this project; a determination of the volume of existing and potential recyclable plastic, cardboard, and glass generated by communities the size of Miles City; and documentation of existing markets.

Project funding will also be contingent on an arrangement for coordination through the Eastern Plains Resources Conservation Development Council and DNRC's approval of the project scope of work and budget.

---

Project No.: RRD-22

APPLICANT NAME: Missoula County

PROJECT/ACTIVITY NAME: Missoula County Aquifer Monitoring and Remediation Project

AMOUNT REQUESTED: \$ 85,929

OTHER FUNDING SOURCES AND AMOUNTS: \$ 7,157 - Missoula County

TOTAL PROJECT COST: \$ 93,086

PROJECT DESCRIPTION:

The Missoula City-County Health Department has been in the process of developing a groundwater protection program since 1987. The Missoula valley aquifer was designated a "sole-source aquifer" by the U.S. Environmental Protection Agency in 1988. The aquifer is the only source of drinking water for approximately 65,000 area residents. Missoula County applied and received approval for grant funds from the 1989 Legislature to purchase equipment and provide training for a Hazardous Materials Emergency Response program which will allow the health department to quickly respond to spills which could threaten the aquifer. The county will receive these grant funds pending availability of grant revenues.

With this application, the Missoula City-County Health Department is proposing to establish a Missoula Valley Aquifer Monitoring and Remediation Plan to provide a complete and permanent groundwater monitoring network for the Missoula valley aquifer. Additionally, an inspection program will be established for the protection of the aquifer.



The network will allow continuous monitoring of groundwater quality and quantity. With continuous monitoring in place, current and future trends in the quality of the groundwater can be determined. Baseline data will be established for specific parameters. These then can be monitored to show if and when any changes occur that suggest contamination. This data will also facilitate the assessment of past, present, and future groundwater problems. Based on new data and with data from past investigations, a plan will be prepared to implement recommendations concerning volatile organic chemical contaminants that exist in the aquifer.

#### TECHNICAL ASSESSMENT:

The establishment of a complete monitoring network will include the acquisition of all available monitoring wells and the drilling of at least four additional wells. The University of Montana has granted permission to use nine existing monitoring wells. The city-county health department will also coordinate with the Mountain Water Company to obtain monthly water level measurements from its production wells.

The city-county health department also plans to inspect all potential sources of aquifer contamination and will rank them according to their likely negative impact to the aquifer. The inspection efforts will in essence be an expansion of investigations performed under a previous phase-1 well head protection study. The investigation was conducted to define existing and potential threats to the aquifer.

Information obtained will be used to document and correct contamination problems and to help in defining priorities for implementation of corrective measures. Unpermitted discharges into injection wells will be halted under present and future EPA regulation.

Monitoring data are needed for groundwater management. Missoula County has demonstrated its willingness to actively manage local groundwater resources. The county has experience in collecting groundwater data and has access to university sources who have been actively studying the Missoula aquifer for several years. The county, however, must be willing to commit to a long-term monitoring effort for this program to succeed and provide useful information in the future.

#### FINANCIAL ASSESSMENT:

Of the \$85,929 requested in grant funds, \$61,758 is for salaries and benefits, \$11,600 for lab costs, \$5,091 for equipment, and \$7,480 for drilling of four wells. Missoula County will provide \$7,157 of in-kind funds to be used for administration costs.

Costs presented in the budget appear to be reasonable.

#### ENVIRONMENTAL NOTE:

This program will not in itself result in any environmental impacts. Study results should lead to positive environmental impacts through improved, better-informed resource management.



RECOMMENDATIONS:

A grant of \$85,929 is recommended contingent on DNRC approval of the project scope of work and budget, and with assurance from city and county officials that Missoula County considers groundwater monitoring a priority and plans therefore to fund the groundwater monitoring program beyond the term of the grant agreement.

---

Project No.: RRD-23

APPLICANT NAME: Carbon County, Stillwater County, and City of Big Timber  
(c/o Beartooth Resource Conservation and Development Area)

PROJECT/ACTIVITY NAME: Integrated Waste Management in South Central Montana

AMOUNT REQUESTED: \$ 96,562

OTHER FUNDING SOURCES AND AMOUNTS: \$ 32,700 - Applicants  
\$ 45,049 - U.S. Soil Conservation Service,  
Keep Montana Clean and Beautiful,  
Midwest Assistance Program, and  
Billings Recycling

TOTAL PROJECT COST: \$ 174,311

PROJECT DESCRIPTION:

Stillwater County, Carbon County, and the City of Big Timber in Sweetgrass County have proposed a project to increase the level of public participation in recycling and composting of solid waste. The group intends to achieve this goal by enacting an extensive public education program on the environmental benefits of recycling and the cost savings that will be realized by extending the life of landfills that would otherwise receive this waste. Education efforts will include a traveling display, brochures, flyers used to advertise recycling drives, preparation of a school education lesson on solid waste management, newsletters, and a small incentive/award program. In addition, the project will provide the facilities and equipment to make recycling and composting more economical and convenient. Equipment to be purchased includes six drop-off boxes for the collection of recyclables, a portable baler, a can/glass crusher, a chipper-composter, and curbside bags.

The solid waste management effort will be headed up by a three-county solid waste and recycling committee composed of representatives from cities, counties, solid waste districts, the general public, and the Beartooth Resource Conservation and Development Area. Technical and administrative assistance will come from the Beartooth Resource Conservation and Development Area, with

additional technical assistance from Keep Montana Clean and Beautiful and the Midwest Assistance Program. Billings Recycling will act as broker for recyclables.

By the end of 1993, the applicant hopes to have achieved an 84 percent voluntary public participation rate for recycling in six communities (Big Timber, Joliet, Red Lodge, Columbus, Bridger, and Park City) and a 50 percent public participation rate in the remaining areas. In addition, it hopes to have a 50 percent public participation rate for composting by the end of 1993. Percentage rates reflect the proportion of the population within the project area who will practice some form of recycling or composting during the course of the year because of the project. The project will require two and one-half years to complete.

#### TECHNICAL ASSESSMENT:

The project is an impressive cooperative effort between local government, quasi-public, and private entities seeking to reduce the amount of waste entering area landfills. Public education is a major prerequisite to achieving this objective, and the project sponsors adequately emphasize the importance of this aspect in changing public attitudes about solid waste management. The proposal also acknowledges the need for commitment of a paid coordinator to oversee the project.

The proposal lacks detail in several areas, however. First, there is uncertainty regarding the composition of waste presently entering area landfills and how much of this waste-load could be reduced through recycling and composting. Second, little attention is given to defining the market for recyclables which will be collected through the drives and curbside pickup programs. Household hazardous wastes are also mentioned but no strategy is set forth to deal with this waste component. In summary, there is some question whether sufficient technical and strategic planning has been conducted to support the full-scale program proposed here.

#### FINANCIAL ASSESSMENT:

Total project costs are estimated at \$174,311 of which \$96,562 would be covered by this grant. \$18,200 in grant money would be used to employ a half-time solid waste/recycling coordinator for the two and one-half year period. Grant expenditures for supplies, materials, and communications are estimated at \$970; \$10,367 would be used to pay for displays and printed materials. Remaining grant funds would be used to purchase 6 drop-off boxes for \$12,000, a portable baler for \$5,100, a can/glass crusher for \$3,900, a chipper/composter for \$21,000, and curbside bags for \$25,025.

The project sponsors will contribute \$28,800 in salaries and benefits for two part-time Solid Waste District employees and \$3,900 for operation and maintenance of purchased equipment.

Other sources of matching dollars include the part-time services of the Beartooth Resource Conservation and Development Area coordinator and secretary, a public information specialist from the U.S. Soil Conservation Service, and Recycling Committee staff members. Several hours of assistance per month from

Keep Montana Clean and Beautiful, the Midwest Assistance Program, and Billings Recycling are also identified. Other contributions include a \$2,000 trailer donated by a local grocery store owner for the drop-off boxes.

ENVIRONMENTAL NOTE:

The project will have positive environmental benefits to the extent that it can reduce the flow of recyclable and hazardous household wastes to landfills.

RECOMMENDATIONS:

DNRC recommends a grant in the amount of \$45,437, contingent on DNRC approval of the scope of work and budget. Grant funds may be used to pay for the salaries and operating costs outlined in the proposal. The remaining funds should be spent to purchase informational materials used to develop and implement a public informational campaign on the methods and benefits of recycling and composting; conduct recycling drives; buy drop-off boxes needed to establish a permanent drop-off system for recyclables; and purchase a can/glass crusher.

This project was also submitted for funding under the Reclamation and Development Grants program. Funding of the project under one program will preclude funding under the other.

---

Project No.: RRD-24

APPLICANT NAME: Meagher County Conservation District

PROJECT/ACTIVITY NAME: South Side Canal Lining Project

AMOUNT REQUESTED: \$ 100,000 - Grant

OTHER FUNDING SOURCES AND AMOUNTS: \$ 25,000 - Applicant  
\$ 25,000 - ASCS Grant or Loan

TOTAL PROJECT COST: \$ 150,000

PROJECT DESCRIPTION:

Funds are requested to line areas in an additional 15,000 feet of the South Side Canal in Meagher County. The 11-mile canal, which is a diversion from the North Fork of the Smith River, has been noted for excessive seepage since it was constructed in about 1939; diversion losses are now estimated at 75 percent. Five previous partial sealing or lining projects have been completed. DNRC provided partial funding through loans in 1988 and 1989. Federal cost sharing grants have been provided by the ASCS, and the Soil Conservation Service has furnished engineering services.



Approximately 14 percent of the canal is now re-lined. This project will add an additional 16 percent. The applicant indicates at least an additional 10,000 feet or 17 percent should also be lined to substantially reduce the diversion losses that now occur.

The proposed lining will consist of a 20 mil reinforced plastic membrane covered with 12 inches of graded soil cover. The canal will be regraded and the slopes flattened prior to placing the liner.

#### TECHNICAL ASSESSMENT:

The proposed project is part of a continuing program to assess and reduce seepage losses from the canal. Flows have been measured in various sections of the canal to locate the segments with the greatest losses. Some of the most critical sections have already been lined; flow measurements and soil borings will be taken to locate the sections with significant leakage that remain. This project will be followed by several smaller annual projects.

Earlier attempts at sealing the canal in the 1960s and 1970s using bentonite were fairly effective initially, but the benefits did not last long. Other alternatives, such as concrete lining, have been considered, but the projected costs per year of service all exceed the proposed soil-covered membrane lining.

The proposed plastic membrane lining has been used elsewhere successfully including the smaller projects in previous years on this canal. The extra deep (12 inch) soil cover is to prevent damage from cattle. The applicant has estimated an effective service life of 20 years.

As proposed, this project should significantly reduce canal seepage losses. The sections with highest losses will be lined, but 60 percent of the canal will not be lined so canal losses may remain quite high. The seepage losses from the two smaller lining projects done in 1988 and 1989 have had little net benefit. The linings are working well in these sections, but losses in the unlined sections are still high.

#### FINANCIAL ASSESSMENT:

The finances for this proposed project are to come from a DNRC grant, a DNRC loan, a federal ASCS cost sharing grant, and operational funds from the South Side Canal Association. The estimated total project cost, based on the previous projects, is \$150,000. A grant of \$100,000 is requested to fund the project including \$2,000 for administrative costs; \$1,000 for professional salaries, \$90,000 for construction, and \$7,000 for contingencies.

The South Side Canal Association is currently making capital improvement payments of \$2.13 per acre-foot and maximum annual operation and maintenance payments of about \$7.00 per acre-foot.



ENVIRONMENTAL NOTE:

This project could provide environmental benefits if less water is diverted from the North Fork of the Smith River; the fishery and to some extent the wildlife along the river will benefit. Significant instream benefits are not likely to be realized, however, because the water saved through seepage control will continue to be diverted and applied more efficiently to the land.

Negative environmental impacts will be minor and only associated with the relatively short-term construction activities. The canal is along Highway 89, so efforts will be made to make the canal more aesthetically pleasing. Slopes will be reduced and blended in more with the natural surroundings. Disturbed areas will also be reseeded.

RECOMMENDATIONS:

DNRC recommends that an assessment of canal losses be made to determine an overall plan for lining the canal and controlling seepage and then, a grant of 25 percent of the project cost up to \$37,500 and a loan of up to \$62,500 subject to approval of the scope of work, budget, and funding from other sources.

Any reduction in the scope of work will result in a proportionately smaller grant. If grant funding isn't available, the district can request a DNRC loan of up to \$100,000.

---

Project No.: RRD-25

APPLICANT NAME: Town of Belt, Cascade County

PROJECT/ACTIVITY NAME: Belt Sewage System Improvements

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 100,000

PROJECT DESCRIPTION:

The City of Belt is located on highways 87 and 89 in Cascade County about 21 miles southeast of Great Falls. Belt Creek flows through the city, which has a population of about 825. The city's sewage collection and treatment system need improvements to increase reliability and thus prevent problems associated with a disruption of service.

The proposed work will replace standpipes and valves in the two lagoon cells, stop the leakage from lagoon cell Number 2, and construct a new main lift station and the pipeline from it to the lagoons. This new lift station would eliminate the need for an existing gravity sewer main which is exposed on the stream bed where it crosses Belt Creek and is subject to damage during flood flows.

#### TECHNICAL ASSESSMENT:

If the gravity sewer main crossing Belt Creek were damaged during flooding, it would disrupt service and allow raw sewage to enter the creek. No history of a previous problem was reported, but the potential for one was clearly pointed out. The proposed new lift station and force main would eliminate this gravity sewer main across Belt Creek and would not be subject to flooding. A partial alternative would be to flood proof the existing lift station.

The seepage from lagoon cell Number 2 is indicated by a patch of cattails. Except for tree growth, the dikes of the lagoons were reported in excellent condition in 1988, so correction of this seepage should be relatively easy. The standpipe and valve in each of the two lagoon cells are rusted and need to be replaced.

#### FINANCIAL ASSESSMENT:

The city submitted a revised financial plan in July decreasing the total project cost from \$135,000 to \$100,000. The entire \$100,000 has been requested as a grant because the mayor says city payment of this cost would cause financial hardship. Grant funds would pay for \$1,000 in administrative project coordinator cost; \$4,000 in finance cost; \$11,100 in professional staff and consultants; related professional costs of \$1,900; \$72,000 in construction cost; and \$10,000 in contingencies. Because the city has repayment capabilities, the eligible grant limit is 25 percent or \$25,000 in this case.

Sewer utility charges are now \$6.60 per month for the approximately 250 users. For comparison, the payoff of a \$75,000 loan at 9 percent for 20 years would cost each user about \$2.70 per month.

#### ENVIRONMENTAL NOTE:

The potential for long-term positive environmental benefits would result from providing greater safeguards for water quality in Belt Creek. Also, greater system reliability would reduce the risk of sewer backups in buildings.

The proposed work would have little negative environmental impact beyond soil disturbance during construction. Revegetation to an undisturbed state is proposed. Other adverse impacts such as noise and dust would be minimal and localized.

#### RECOMMENDATIONS:

DNRC recommends a grant of \$25,000 and a loan of \$75,000 contingent upon the city arranging for additional funding and upon DNRC approval of the scope of work and budget. DNRC further recommends that the city complete an assessment to determine the feasibility of flood-proofing the sewer line crossing Belt Creek. Any reduction in the scope of the project will result in a proportionately smaller grant.

---

Project No.: RRD-26

APPLICANT NAME: Teton County Conservation District

PROJECT/ACTIVITY NAME: Test Sites for Alternative Diversions

AMOUNT REQUESTED: \$ 12,980

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 12,980

PROJECT DESCRIPTION:

Funds are requested for the design, installation, and demonstration of better ways of diverting water from creeks that have gravel and earth dikes. Approximately six representative test sites for alternative water diversion structures in Teton County will be selected. The alternative structures demonstrated should have less stream and stream bank environmental impacts and should be cheaper on a long-term, annual-cost basis.

The project would include the design, construction, evaluation, and demonstration of the alternatives. Video taping and on-site tours would be a part of the project.

TECHNICAL ASSESSMENT:

The plan is to use a steel plate and frame diversion dam developed by the Montana Department of Fish, Wildlife and Parks at one or more of the alternative sites. The Department of Fish, Wildlife and Parks has indicated that several have already been installed in the state with generally good, but mixed results.

The status of previous work by others is unknown. In a project review letter, SCS State Conservationist Richard Gooby said that the SCS was currently sponsoring a task group to consolidate ideas on ways to build economical and environmentally sound diversions.

The proposal should be better developed with more specifics and details.

FINANCIAL ASSESSMENT:

The requested grant amount of \$12,980 is very low considering the proposed scope of work. However, this amount of money may be adequate if the overall scope of work is limited and better defined. Although design, construction, evaluation, and demonstration are all included in the project scope of work, little money is budgeted in the proposal to cover the associated costs. Some financial contribution by the district may be necessary and desirable. Proposed funding would be used to pay \$1,000 in contract administration costs; \$9,600 in construction costs; \$1,200 for a video camera; and \$1,180 for inflation.



ENVIRONMENTAL NOTE:

The potential for positive environmental benefits is great if better methods for stream diversion structures can be developed. The negative aspects directly associated with this project would be relatively minor and would approximate ordinary and customary irrigation diversion work in streams.

RECOMMENDATIONS:

DNRC recommends a grant not to exceed \$11,780 for this project. The amount is slightly less than the requested amount as the purchase of a video camera does not seem necessary. The applicant could rent or borrow this equipment.

The applicant should coordinate the project with the SCS investigation currently being conducted on irrigation diversion facilities. Funding is contingent on DNRC approval of a detailed scope of work and budget; consistent with the assessment by the Montana Department of Fish, Wildlife and Parks, the scope of the project should be better defined and possibly reduced.

Project No.: RRD-27

APPLICANT NAME: City of Chinook, Blaine County

PROJECT/ACTIVITY NAME: Milk River Weir Replacement

AMOUNT REQUESTED: \$ 100,000 - Grant  
\$ 200,000 - Loan

OTHER FUNDING SOURCES AND AMOUNTS: \$ 250,000 - Economic Development  
Administration  
\$ 202,313 - Community Development Block Grant

TOTAL PROJECT COST: \$ 752,313

PROJECT DESCRIPTION:

The project will replace a low concrete rubble weir structure across the Milk River with a low concrete gravity dam. The dam will be about 20 feet high by 110 feet long, which will provide a more stable pool for the water intake for the City of Chinook. This will ensure adequate submergence of the intake and adequate suction head, and will reduce sand and sediment intake.

Chinook is in north central Montana on U.S. Highway 2 about 21 miles east of Havre. The city had a 1980 population of 1,660 people, down about 8 percent from 1970. Municipal water from the Milk River is obtained under a 1984 contract with the U.S. Bureau of Reclamation. The water treatment plant was constructed in 1977. This proposal was prompted by a partial washout of the existing rubble



dam in May 1990. The proposed concrete dam will provide a deeper intake pool to reduce sediment intake and increase reliability during floods, low flows, and winter icing conditions.

The application is fairly well done, but it was prepared by a consultant under short notice and so lacks details that might otherwise have been provided.

#### TECHNICAL ASSESSMENT:

The project dam will become a part of the water system owned and operated by the City of Chinook. Construction permits based on technical and environmental reviews from the U. S. Army Corps of Engineers (404 Permit), the Montana Department of Fish, Wildlife and Parks, and DNRC, and other necessary permits will be obtained. The dam will be similar to dams at other locations in the Milk River drainage at Havre, Harlem, and at the Paradise Valley diversion. A complete design by a professional engineer including site surveying, a hydrologic analysis, and geotechnical investigation is proposed. No unusual technical difficulties are anticipated.

Proposed alternative solutions include maintaining the existing rubble dam, developing an alternate groundwater source, constructing an infiltration gallery, or constructing an intake tower. The most logical one is to maintain the existing dam, but it falls short of the proposal in both service and reliability. The Water Quality Bureau confirms a history of some maintenance problems associated with the intake of sand and silt.

No hydrologic or hydraulic analyses have been made.

#### FINANCIAL ASSESSMENT:

The funding for this project is to come from several sources. The city has also requested a Water Development Program loan for \$200,000. The balance of the estimated total cost of \$752,313 is to come from the U.S. Economic Development Administration's Public Works Impact Program (\$250,000) and the Montana Community Development Block grant Program (\$202,313). Funding decisions on the Economic Development and Community Block grants should be known by December, 1990.

The project budget was prepared by a consulting engineer and identifies the sources of funding for each category of work. The \$300,000 in loan and grant funds requested would pay for \$11,000 in grant administration; \$99,600 in professional salaries and consultant costs; and \$189,400 for construction. Program guidelines restrict combined grant and loan assistance to \$200,000. A source of additional funds will be necessary.

The city's bonded indebtedness to cover the DNRC loan will increase from \$2,027,500 to \$2,227,500. The city currently has an outstanding balance on its general obligation bond for the swimming pool of \$37,500. In addition, it has three revenue bonds for the water system with a total outstanding amount of \$442,498 and a sewer revenue bond with a balance of \$445,000.

ENVIRONMENTAL NOTE:

The proposed permanent concrete dam should provide long-term water quality benefits. The new structure will eliminate the need for continued annual repairs and rubble additions, which increase stream turbidity.

The proposed construction will be during low flow months. Cofferdams will be used to mitigate short-term water quality impacts. Riprap is proposed to reduce bank erosion. Minor wildlife impacts will occur during construction activities, but no permanent changes will occur.

The city's water diversion and use pattern will not change as a result of this project.

RECOMMENDATION:

DNRC recommends a \$50,000 grant, funding to be subject to more design details and evaluation of alternatives, and DNRC approval of the scope of work and project design. Any reduction in scope will result in a proportionately smaller grant. DNRC grant funding is contingent on the city obtaining the additional project funds from others as outlined in the application.

DNRC also recommends a \$150,000 Water Development Program loan also subject to more design details and evaluation of alternatives and DNRC approval of the scope of work and project design, contingent on the city obtaining the additional project funds outlined in the proposal.

---

Project No.: RRD-28

APPLICANT NAME: Town of Columbus

PROJECT/ACTIVITY NAME: Columbus Recreation Project

AMOUNT REQUESTED: \$ 99,906

OTHER FUNDING SOURCES AND AMOUNTS:

\$	3,307	- Columbus
\$	3,000	- Montana Power Company (in-kind)
\$	2,000	- Soil Conservation Service (in-kind)
\$	42,859	- various civic groups, contractors, volunteers, local government

TOTAL PROJECT COST: \$ 151,072

#### PROJECT DESCRIPTION:

The Town of Columbus requests funds to develop a recreation complex on 34 acres of property adjacent to the town. The long-range plan for the complex calls for four irrigated little league/softball fields, a multipurpose athletic field, a horseshoe pitching area, a walking/jogging path, a concession building, restroom facilities, and an access road and parking area. Grant funds will be used for the first phase of development, including the seeding of two little league/softball fields, installation of well and sprinkler irrigation, fencing, construction of a concession building with water and sewer service, and the construction of a 3,000-foot walking/jogging path.

The 34-acre recreation complex will be developed on land leased from the Department of State Lands through a 20-year renewable lease. The lease was obtained in September 1988 with a stipulation that the property be used exclusively for recreational purposes.

Active participants providing volunteer labor and promotion of the project include the Kiwanis, Optimists, Jaycees, Little League Baseball and Softball associations, and the Chamber of Commerce. The Town of Columbus and Stillwater County will provide equipment for road construction and preparation of the playing field.

#### TECHNICAL ASSESSMENT:

The applicant has presented a well thought-out and detailed plan for development of the recreation complex. Private firms and public agencies have been involved in the plan preparation.

The site for the complex has historically been leased for agricultural purposes. Attempts at dryland farming by previous lessees have been largely unproductive due to the presence of highly alkaline soils caused by seepage from irrigation ditches. The applicant is proposing to apply gypsum at a rate of 10 lbs. per 100 square feet where excess salts are a problem. This practice may be of questionable value if adequate drainage cannot be provided; the addition of irrigation water for turf grass may aggravate the situation if a high water table is present during the irrigation season.

#### FINANCIAL ASSESSMENT:

The costs identified in the application appear to be reasonable and adequate to complete the first phase of improvements to the complex. Total project costs are estimated at \$151,072 of which \$99,906 would be covered by this grant. The grant would pay for \$6,390 in engineering costs and \$79,874 in construction costs (including labor, equipment, and materials). Ten percent, or \$7,987, would be set aside for contingencies and another six percent, \$5,655 would be allowed for inflation.

The applicant will contribute all administrative costs. The town leases the state land for \$125 per year which is an extremely attractive price for a highly visible and well-located piece of property for recreational development.



ENVIRONMENTAL NOTE:

The proposed development will result in an improvement to the property which is presently affected by saline soils and infested with weeds. However, whether or not the saline/alkaline soils can be improved with the simple addition of gypsum must be determined before further development takes place.

RECOMMENDATIONS:

A grant of \$99,906 is recommended contingent on DNRC approval of the project scope of work and budget, and on the town's ability to satisfy DNRC that the soil salinity/alkalinity problem can be corrected or alleviated.

Project No.: RRD-29

APPLICANT NAME: DNRC, Water Resources Division

PROJECT/ACTIVITY NAME: Geographic Information System Pilot Study Project

AMOUNT REQUESTED: \$ 99,623

OTHER FUNDING SOURCES AND AMOUNTS: \$ 11,925 - GeoResearch, Inc.  
\$ 6,000 - Department of Natural Resources  
and Conservation  
\$ 33,040 - DNRC in-kind

TOTAL PROJECT COST: \$ 150, 588

PROJECT DESCRIPTION:

The Water Resources Division of DNRC requests funds to conduct and then evaluate the results from a Geographical Information System study of a defined watershed subbasin in Montana. Based on this study, the advantages offered by the Geographic Information System applied to the tasks of the Water Resources Division will be documented.

The study will develop a Geographical Information System database containing all available hydrologic and water right information applicable to a study area. The study will also develop a method of comparing actual water use to water right claims filed for the study area. The Geographical Information System's water right and hydrologic data mapping capability will be evaluated for usefulness in administering water rights. The Geographical Information System will be used to model water rights and basin hydrology to provide planners with an assessment of typical water use and corresponding water availability.

A team of DNRC personnel and an individual or group with Geographical Information System expertise will be identified and recruited to assist in choosing the drainage basin for the study and to provide the staff time and advice needed to complete the project.



#### TECHNICAL ASSESSMENT:

Reviewers were very supportive of the project concept. The application describes a detailed approach for the creation of the pilot study. The proposal is designed to purchase basic equipment, provide staff training, and to set the groundwork necessary for creating a Geographical Information System for the Water Resources Division of DNRC. The applicant has had experience with the technology and is able to describe similar successful applications in other states.

The proposed project will provide DNRC staff with direct experience with the Geographical Information System under the direction of an experienced individual or group. Such hands-on experience will provide an appropriate and important opportunity for DNRC to assemble in-house Geographic Information System capability. At the completion of the project, DNRC will have the basic equipment and expertise necessary to support the application of Geographic Information System technology to the complex resource concerns of the Water Resources Division, supported by the successful demonstration of the technology to a specific application. DNRC hopes, as a result of the documented success of the proposed study, to obtain the support and funding to integrate the Geographical Information System technology into its standard professional practices.

Currently the Montana State Library Natural Resource Information System program has the resources necessary to assist DNRC staff in conducting a study on a single basin. Staff at NRIS are willing to assist DNRC staff in gaining the expertise and in demonstrating the Geographical Information System's applicability to DNRC projects. Access to the library's Geographical Information System database is limited because the library has a limited amount of equipment and work stations. Water Resource staff could, according to the Reserved Water Rights Compact Commission staff, share equipment currently housed within DNRC to complete the proposed project.

The basin selected for the proposed study should involve a basin in which DNRC will be making management decisions within a few years. The results of the Geographical Information System pilot study should include an assessment of future funding and staffing needs. Also, the pilot study should focus solely on water issues affecting the various divisions mentioned, not all Geographical Information System needs for the entire department. Each division has needs beyond those to be addressed in the study and these vary widely.

The Water Resources Division should include others in the proposed project team; for example, representatives from the Water Quality Bureau in Department of Health and Environmental Sciences, U.S. Geological Service, Natural Resource Information System, and Reserved Water Rights Compact Commission might contribute greatly. Instead of using four DNRC staff part-time to develop the Geographical Information System, one person could perform this task with guidance from a steering committee.

#### FINANCIAL ASSESSMENT:

The proposed total cost of the pilot program is \$150,588. The applicant has requested a grant of \$99,623 including \$39,915 for operating expenses (including consulting costs, travel, supplies, and printing) and \$59,708 for computer equipment and software. The project budget also identifies \$33,040 for

personal services which will be provided in-kind by DNRC and an additional \$6,000 for travel and communications which DNRC will also pay. GeoResearch, Inc. of Billings will contribute approximately \$11,925 in-kind by reducing its consultant service fees by 50 percent.

The proposed cost for this pilot study is excessive. The hardware (equipment) costs and the consulting fees could be cut by using existing equipment and resource personnel available within DNRC and the Natural Resource Information System of the State Library. Staff at NRIS indicated that they would support a single basin study and that this could be accomplished with only those costs associated with DNRC staff time.

ENVIRONMENTAL NOTE:

The pilot study will not result in the construction of facilities or any activity having a direct impact on the environment. The results of the study, if successful, should have a positive effect on water resources as DNRC implements the management recommendations.

RECOMMENDATIONS:

No grant is recommended, but matching funds and staff should be used to complete the single basin study and, with this experience, a budget could be developed and funding acquired through the state's next executive budget process.

Project No.: RRD-30

APPLICANT NAME: Town of Glasgow

PROJECT/ACTIVITY NAME: Water and Wastewater Comprehensive Plan

AMOUNT REQUESTED: \$ 80,950

OTHER FUNDING SOURCES AND AMOUNTS: \$ 19,050 - Applicant

TOTAL PROJECT COST: \$ 100,000

PROJECT DESCRIPTION:

The City of Glasgow requests \$80,950 to develop a comprehensive water and wastewater system Master Plan. The purpose of the plan is to evaluate the existing municipal water distribution and storage system, the municipal wastewater collection and treatment system, and also to develop a current base map with overlays for the utility systems. The map would depict size and location of lines; location of valves; fire hydrants and valves; and supply, storage, and treatment facilities and other appurtenances associated with the water and wastewater system.

The water storage and distribution systems will be computer modeled to estimate flows in the system. From this simulation, the adequacy of system pressure, line size, and storage will be determined. The wastewater collection system would be inventoried and selected areas inspected by television cameras to determine pipe condition. The wastewater treatment system will be evaluated for current and future hydraulic and biological loadings.

The development of the Master Plan is expected to take one year with work projected to begin in July 1991.

#### TECHNICAL ASSESSMENT:

This application is the same as the 1988 request received from the City of Glasgow except that the amount of the project has been reduced by \$19,050.

The approach the city is taking, to conduct a sound engineering investigation of its water and wastewater facilities and in turn develop a Master Plan which will define and prioritize improvements to be made, will provide for the wise investment of funds through a well-defined plan. The plan will serve as a very useful document for city officials, state agencies, and consultant engineers to ensure that timely and orderly improvements are made to Glasgow's water and wastewater system.

The application indicates that the city has repaired over 200 water main leaks in the past 12 years, converted from a groundwater to surface water supply (1987), and in 1987, also replaced six blocks of sewer main. Even with these improvements, the aging system is in need of extensive work.

#### FINANCIAL ASSESSMENT:

The total project cost is estimated at \$100,000, of which \$80,950 would be satisfied through a DNRC grant, and the remaining \$19,050 will be contributed by the City of Glasgow. The \$100,000 project would pay a consulting engineer \$42,500 to conduct a mapping program, water system evaluation, and wastewater system evaluation and to prepare a document. A contractor would receive about \$28,450 to do sewer main cleaning and televising. Administrative costs would be about \$19,050; these will be provided by the city. A contingency fund of \$10,000 would be established to cover unanticipated costs.

Actual costs of the engineering will be determined by negotiation of a well-defined scope of services with the consulting engineer. Work completed in the preliminary stages of the wastewater system inventory will help select the highest priority sewer mains for televising. The costs for cleaning and televising of sewer mains will depend upon the available funding level for this phase. Actual costs for the work of televising sewer mains will be determined by negotiation or bidding.

City administration expenses will include the efforts of the director of public works and city planner. Their work will include input during the planning process, coordination with the city council and planning board, and initiation of the capital improvements program from the Master Plan data.



The proposed Master Plan and subsequent capital improvements program will allow the city to project short falls in its budget and to apply for grants and loans to supplement the available local funding. Without the Master Plan, the city has no way to identify future public facility needs in long-term planning.

ENVIRONMENTAL NOTE:

No negative environmental impacts will be associated with this Master Plan. Long-term planning efforts using the document generated from this project may lead to water main replacements to reduce water losses, sewer main replacement to protect sanitary conditions, and ultimately, to higher quality discharges of treated effluents to the Milk River.

RECOMMENDATIONS:

DNRC is recommending that a grant in the amount of \$80,950 be issued to this project contingent upon DNRC approval of scope of work, budget, and consulting engineer.

---

Project No.: RRD-31

APPLICANT NAME: Big Sky Sewer District - Gallatin County RID No. 305

PROJECT/ACTIVITY NAME: County Water and Sewer District for Big Sky, Montana

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 15,000 - Gallatin County RID No. 305  
\$ 15,000 - Lone Mountain Springs Water Company  
\$ 5,000 - Big Sky Owners Association

TOTAL PROJECT COST: \$ 135,000

PROJECT DESCRIPTION:

This project will study the feasibility of combining the Big Sky Sewer District (RID 305) and portions of the Lone Mountain Springs Water Company into a new utility district. The objective will be to assess and develop the legal, financial, administrative, management, and technical bases and methodology for a new county water and sewer district.

The Big Sky resort area lies west of U.S. Highway 191 approximately halfway between Bozeman and West Yellowstone. Gallatin County RID No. 305 was created by a resolution of the Board of County Commissioners in August 1971; it is managed by a board of trustees with a part-time staff. The district provides sewer service for the entire resort area through a collection, treatment, and on-site disposal system.



The Lone Mountain Springs Water Company is a privately owned subsidiary corporation of Big Sky, Inc. (also known as Boyne Mountain U.S.A.) and is regulated by the Montana Public Service Commission. Lone Mountain Springs Water Company owns and operates a water company with three separate water systems serving the resort area. The company hopes to sell two of the systems to the proposed water and sewer district; the system serving the main resort area will be retained by the company.

#### TECHNICAL ASSESSMENT:

The Big Sky Sewer District (Gallatin County RID No. 305) is relatively large and complex for a mountain resort area. The district has about 20 miles of sewer pipelines. For treatment and disposal, it has a series of treatment and storage ponds, filtration and chlorination facilities, and a golf course irrigation system. The storage and treatment facilities are being operated near capacity. Leakage from the holding cells affects downstream groundwater quality slightly. The treatment facilities do cause strong odor problems each spring.

The Lone Mountain Springs Water Company has three water systems serving the Mountain Village at Big Sky, Hidden Village, and the Meadow Village area. These systems each have their own water supply and transmission, distribution, and storage facilities. The combined service areas are essentially identical with the service area of the sewer RID.

The water systems at Big Sky have reportedly experienced a number of problems. These problems have resulted in periods when Big Sky has been without water or where drinking water quality has been threatened. A lot of the problems are attributed to inadequate installation and maintenance of the improvements. Customers have complained of being short of water for several days at a time. Breaks in the mains have reportedly gone undetected for extended periods of time.

The water company has received a number of requests for expanded service to new areas. However, there is no master plan for the area and reportedly no financing available. The application states the sewer is reaching design capacity and that it will not be long until the treatment and disposal system will have to be expanded and upgraded.

#### FINANCIAL ASSESSMENT:

The total project cost is \$135,000, of which \$35,000 will be paid by the RID District, the private water company, and the Big Sky (Home) Owners Association. The grant funds requested would be used to pay \$24,000 in contract administration costs; \$74,000 in professional and consultant costs; and \$2,000 in travel, printing, and supplies.

The Water Quality Bureau has indicated that financial difficulties have not been documented or supported by current water and sewer rates paid by the users. The bureau also indicates that it is unclear what services will be provided by the superintendent and the program manager for the \$21,000 budgeted. Project costs could be reduced if assistance was requested from the Midwest Assistance Program and the Rural Technical Assistance Program rather than private attorneys and accountants.

ENVIRONMENTAL NOTE:

As this is an administrative study and evaluation project, there would be no direct environmental impact. However, if a combined water and sewer district resulted in better planning, operation, and maintenance as proposed, then long-term positive benefits would result. These would primarily relate to water resource utilization and better wastewater treatment and effluent disposal.

RECOMMENDATIONS:

DNRC recommends a grant of \$33,750, limited to 25 percent of the project cost because of repayment capability. All three of the water systems owned and operated by the Lone Mountain Springs Water Company should be included in the study for consolidation. The scope of work in this project will be limited to determining the feasibility, benefits, costs, and savings of combined water and wastewater utilities. The project is contingent on the district's ability to arrange for all necessary project funding and on DNRC's approval of the scope of work and budget.

Necessary inventories, including as-built drawings, should be provided by the respective utilities. Future operational needs such as computer systems (hardware and software) and databases should be a part of a future project phase if a decision is made to proceed with consolidation.

---

Project No.: RRD-32

APPLICANT NAME: Missoula City-County Health Department

PROJECT/ACTIVITY NAME: Linda Vista Sewer Interceptor Project

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 328,195 - EPA Construction Loan  
\$ 8,739 - Missoula County

TOTAL PROJECT COST: \$ 436,934

PROJECT DESCRIPTION:

The Linda Vista Interceptor project will extend sanitary sewer service into a residential area of Missoula known as Linda Vista. Over 300 existing lots could be connected to the Missoula sewer system. At present, the majority of these lots are on individual sewer systems (septic tank and drain field or seepage pit), and the remaining (75 lots) are served by a central septic tank and drain field system. Many of the homes have individual wells that serve as their water supply. A public water system has been installed in the area that residents could connect to if they so desire.

In February 1990, Missoula County collected water samples from 82 individual wells and found that 16 of them tested positive for coliforms, and 8 had nitrate concentrations in excess of the drinking water standard of 10 milligrams/liter. These concentrations represent a violation of the Montana Water Quality Standards and in the opinion of the Missoula City-County Health Department, are a continuing threat to the Missoula aquifer and Missoula residents who rely on the aquifer as their sole source of water.

The individual sewer systems are the only identified significant source of nitrate contamination in the area, and therefore it is expected that public sewer service in the Linda Vista area will result in the remediation of contaminated groundwater and individual drinking water supplies.

This project will not provide sewer service to each lot in the Linda Vista area, but will extend the interceptor line into Linda Vista. The presence of this interceptor will allow for connection to the City of Missoula sewage collection system at a reasonable expense since the residents will need to install only localized collector systems in order to receive centralized sewer service. The applicant believes this phased approach to construction of sewer service to the Linda Vista area will allow costs to be more palatable to the residents of the area.

#### TECHNICAL ASSESSMENT:

The City of Missoula has recently annexed the east Cold Springs area of Missoula and is planning to extend sewer service into the Cold Springs area in the next year by installing a STEP system. Once the east Cold Springs project is installed, it will provide City of Missoula sewer collection system facilities to within 9,800 feet (1.86 miles) of Linda Vista. Installation of a force main sewer between east Cold Springs and Linda Vista is proposed, and like the Cold Springs area, the future plans for Linda Vista call for installation of the STEP system. The installation of this interceptor does not, however, limit the area to STEP system service.

Linda Vista is part of the EPA 201 Facilities Planning area for Missoula, and the City of Missoula sewage treatment plant has the capacity to accept the additional sewage flows from the Linda Vista area. The applicant does not indicate that any alternatives to a force main interceptor were investigated, but because of topography and cost limitations, it is not practical to use a gravity sewer line for this interceptor. A force main seems to be the only reasonable alternative.

The contamination of the Missoula aquifer in the Linda Vista area is of serious concern to Missoula and the Department of Health and Environmental Sciences because the aquifer is Missoula's sole source of drinking water. The seriousness of the problem is further evidenced by the fact that the Water Quality Bureau has ranked the Linda Vista project as tied for first in the state as a project with the highest public health and environmental impact.

The project is scheduled to begin in October 1991 and be completed early in 1993. The project itself would not solve the groundwater contamination problem, but the Water Quality Bureau has gone on record as supporting it as a first step in providing centralized sewer service to the Linda Vista area.



#### FINANCIAL FEASIBILITY:

The overall cost of this project is \$436,934. The applicant is planning to fund these costs through a \$100,000 DNRC grant, \$8,739 from the Missoula City-County Health Department and the City of Missoula or Missoula County, and the remaining \$328,195 obtained from bonds through the Montana Water Quality Bureau and EPA construction loan program and potential contributions from owners of undeveloped land that could be served by the interceptor line.

The project construction costs have been estimated by a local consulting firm. The project budget provides for a total labor and materials cost of \$291,289. Added on to the basic construction cost is a 15 percent contingency, a field inspection cost of 10 percent, an engineer planning and design cost of 11 percent, a project inflation cost of 8 percent, and an administration cost of 6 percent.

Most of the line items included in the budget have been assigned at a rate of 25 percent participation by DNRC and 75 percent participation by sources of monies other than DNRC. The exceptions to this are as follows: administration costs are split out 50-50, contingency for unexpected costs is assigned zero percent to DNRC and 100 percent to non-DNRC sources, and inflation contingency is assigned 14 percent to DNRC and 86 percent to non-DNRC funds. Loading of the 25 percent costs into the non-contingency line items ensures the residents of the area that they will be receiving the maximum \$100,000. It is the applicant's understanding that the contingency, engineering inspection, and administration percentages are standard and common for reimbursement by the EPA and EPA-funded sewer projects.

#### ENVIRONMENTAL NOTE:

The project will provide access to a central sewage system. Converting individual systems to the central system would improve domestic water quality by eliminating septic system effluent as a source of groundwater contamination in the Linda Vista area where individual water wells are used extensively for potable water. Agricultural and domestic water supplies supplied by wells in the area would then be improved. Property depreciation caused the lack of potable water would be avoided; it has been estimated by some Missoula realtors that properties in the Linda Vista area with contaminated well water may list as much as \$10,000 under their normal market value.

Properties in the surrounding area will become more available for development. The Water Quality Bureau has rejected some subdivisions of land in the area due to the nitrate contamination problem. If public sewer availability can provide an alternative to subsurface sewage disposal, these properties will be able to develop in areas next to urban Missoula at population densities which are conducive to the conservation of land and energy in the form of transportation costs.

It is anticipated that in the long run this project will help conserve water, land, and energy by providing prudent methods of wastewater disposal which allow for development of land at densities higher than would be allowed with individual septic disposal systems.



RECOMMENDATION:

DNRC is recommending a grant of \$100,000 provided other funding sources are secured. The grant is also contingent upon DNRC approval of scope of work and budget and the applicant showing a commitment from a majority of users within Linda Vista to hook up to the system before the DNRC grant is issued.

---

Project No.: RRD-33

APPLICANT NAME: Cascade and Teton County Conservation Districts

PROJECT/ACTIVITY NAME: Preliminary engineering and environmental assessment for Muddy Creek erosion control project.

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES AND AMOUNTS: \$ 10,000 - Department of Fish, Wildlife and Parks  
\$ 1,000 - Missouri River Fly Fishers  
\$ 111,000 - Bureau of Reclamation

TOTAL PROJECT COST: \$ 222,000

PROJECT DESCRIPTION:

Irrigation return flows discharged into Muddy Creek have been estimated to contribute 50,000 acre-feet to the volume of flow. While return flows are not directly responsible for the sediment load, the increased volume of water in Muddy Creek and bank saturation aggravates down-cutting and bank erosion. The problem becomes severe when wet weather reduces the demand for water, and the combination of runoff and diverted wastewater enters Muddy Creek. Annual sediment discharge varied from 204,700 to 69,900 tons per year from 1968 - 1982, as measured by the USGS stream gauging station on Muddy Creek at Vaughn.

The Cascade County and Teton County conservation districts are requesting a grant in the amount of \$100,000 for the preliminary design and environmental assessment of erosion control structures on Muddy Creek. The proposed construction plan and environmental assessment will be the basis of a request for a federal grant under present guidelines for improving wetlands and water quality on U.S. Bureau of Reclamation projects. Existing studies will be used as a basis for the final plan to control the wastewater from irrigation and provide stabilization of the stream channel and banks. The object is to create wetlands for waterfowl and enhance fishing and recreation along Muddy Creek, the Sun River, and the Missouri River.

The applicants will compile alternative solutions based on information from 67 previous studies on Muddy Creek, input from concerned groups, and state-of-the-art approaches to river restoration and wetland improvement. A local broad-based group will advise and assist in the formulation of the construction plan

and promotion of the funding. The Bureau of Reclamation will conduct the study and produce an environmental impact statement. Other services may be contracted out.

The final results will define a project that will be in accordance with the Water Resource Council principles and guidelines so that federal, state, and private funding may be applied for. It will create a knowledgeable local group and guide the project to completion. It has been estimated that the return flows can be reduced by 80 percent, sedimentation by 75 percent, and nutrients by 50 percent.

#### TECHNICAL ASSESSMENT:

The problem addressed by this proposal is a documented and recurring issue in Cascade and Teton counties. Both natural and man-induced processes are responsible for sediment erosion and transport in the Muddy Creek drainage; variability in sediment loading is a consequence of the processes. Historical sediment and streamflow data correlated to precipitation and irrigation practices should provide insight to sediment transport.

Currently only one stream gauging station is being operated, and several years have lapsed since water quality or sediment samples have been collected. Thus, it is unknown whether conditions have remained the same, worsened, or improved. The lack of recent sediment data will be a shortcoming. Regardless of the management scheme identified, there is a need for pre- and post-project data collection programs and monitoring during the project period. In the absence of these monitoring efforts, the effectiveness of various management options will be difficult to assess.

As indicated in the proposal, the U.S. Geological Survey has collected considerable data on Muddy Creek regarding streamflow, suspended sediment, major ions, and nutrients. The proposal indicates that 67 known studies contain information about Muddy Creek. Further study may not be justified. The problem could be addressed directly through implementing appropriate land-use practices, installing engineering structures, enforcing better irrigation water management, and establishing improved streamflow management and regulation.

The proposed construction plan and environmental assessment represent intermediate steps that will not provide direct benefits but, for substantial cost, will make use of the information already compiled to more closely focus on a number of possible cost-effective solutions. Existing studies focus on reducing irrigation return flows associated with the Greenfields Irrigation District. In contrast, the proposed construction plan will suggest other approaches, including structure and channel modifications, to help Muddy Creek accommodate the increased flow.

The resulting construction plan will represent a cooperative effort between participating groups and will be used as the basis of an application for federal grant funds to construct the recommended structure and channel modifications. Past attempts to secure federal funding failed. The Bureau of Reclamation has now become more concerned with nonpoint source pollution and has a more critical interest in the Muddy Creek problem, which perhaps indicates a greater potential for federal funding. The bureau has agreed to contribute \$111,000 to the effort

and its staff will perform the necessary engineering, hydrology, and environmental impact studies in accordance with the National Environmental Policy Act.

Some of the participants in the advisory group are Montana Power Company, Greenfields Irrigation District, City of Great Falls, Soil Conservation Service, Bureau of Reclamation, sportsman groups, U.S. Fish and Wildlife Service, and the Department of Fish, Wildlife and Parks.

FINANCIAL ASSESSMENT:

The estimated total project cost will be \$222,000 of which \$100,000 would be grant funds. Of the \$100,000 grant, \$20,700 would pay for administrative costs, \$71,600 would pay for salary costs, and 7,700 would pay for related travel, communications, printing, and supplies.

This two-year project involves total administrative costs of \$46,000, salaries of \$159,000, and operating costs of \$17,000. Annual salary costs would be equivalent to two full-time positions at an approximate rate of \$14 per hour. Given the amount of data, complexity of the problem, and the expertise involved, this would not be considered excessive. Administrative costs, which include attorney costs would seem high if a staff attorney is involved; \$20,000 would pay for about 150 hours per year for private legal council.

ENVIRONMENTAL ASSESSMENT:

The study will have no direct environmental impacts.

RECOMMENDATIONS:

A grant of \$100,000 is recommended contingent on DNRC approval of the project scope of work and budget and a commitment of matching funds which will enable the applicants to complete the \$222,000 inventory and engineering study of Muddy Creek.

---

Project No.: RRD-34

APPLICANT NAME: Town of Fairfield, Teton County

PROJECT/ACTIVITY NAME: Fairfield Waterway/Pipeline

AMOUNT REQUESTED: \$ 14,169

OTHER FUNDING SOURCES AND AMOUNTS: \$ 28,337 - Town of Fairfield  
\$ 14,169 - Greenfields Irrigation District

TOTAL PROJECT COST: \$ 56,675



#### PROJECT DESCRIPTION:

The applicant requests funds to convert a 10-foot deep by 500-foot long open waterway drain in Fairfield to a closed 30-inch diameter pipeline. The drain was constructed by the U.S. Bureau of Reclamation as part of a large irrigation project. It is now operated and maintained by the Greenfields Irrigation District. The ditch will be backfilled with borrow material so that the area now taken up by the ditch will be leveled and reclaimed.

The Town of Fairfield is in Teton County about 30 miles west of Great Falls.

#### TECHNICAL ASSESSMENT:

The drain is used to transport shallow groundwater. The Greenfields Irrigation District has granted permission to alter the facility. However, the Bureau of Reclamation wonders if it also acts as a relief drain possibly affecting the shallow groundwater level in that area.

This project will be designed by a professional engineer on the staff of the Greenfields Irrigation District. A preliminary pipeline profile has been prepared and submitted with the application. The district will also provide all field labor and some equipment. After installation, the pipeline will be maintained by the district.

The project will eliminate safety hazards associated with a deep ditch with steep side slopes, reduce the risk of aquifer contamination, and reclaim the surface use of land now taken up by the ditch.

Technical alternatives such as relocating the drain have been considered but are not feasible.

#### FINANCIAL ASSESSMENT:

The total estimated cost of the project is \$56,674. Grant funds totaling \$14,169 have been requested and would be used to pay for construction costs. Fairfield will provide funding from general taxation over a seven year period plus \$5,000 from its gas tax fund.

#### ENVIRONMENTAL ASSESSMENT:

The purpose of the drain is to control the level of shallow groundwater and to transport the water for irrigation reuse downstream. Although the quality of the water should be slightly better, the main benefit will be reduced risk of accidental drowning. Eliminating the deep ditch will also reduce the risk of vehicle accidents and unsightly areas of weed perpetuation.

Some increases in turbidity and sedimentation will occur during construction. Likewise, there will be some dust and noise associated with the construction. There should be no long-term adverse impact. The filling and leveling of the ditch area will eliminate the hazard an open ditch presents and thus will benefit the neighborhood.



RECOMMENDATIONS:

A grant of \$14,169 is recommended contingent upon DNRC approval of the project scope of work and budget. Any reduction in the scope of the project will result in a proportionately smaller grant. If grant funding is not available, the town may request a DNRC loan for the amount requested.

---

Project No.: RRD-35

APPLICANT NAME: Extension Service, Montana State University

PROJECT/ACTIVITY NAME: Education Program in Natural Resource Management

AMOUNT REQUESTED: \$ 98,560

OTHER FUNDING SOURCES AND AMOUNTS: \$ 306,345 - Montana State University,  
Extension Service (in-kind)

TOTAL PROJECT COST: \$ 404,905

PROJECT DESCRIPTION:

The Natural Resource Education Project is a 32-month effort to improve public understanding of the technical principles and policy issues that affect management of natural resources on federal lands in Montana. Montana State University will be the lead agency, with project coordination provided by extension service personnel. The project coordinators have identified the results of a survey conducted by Montana's Public Land Council and the Montana State University Extension Service as an indication of the need for additional education.

Education task teams will be organized using key management people from each of three natural resource areas (range, forest, and minerals). The task teams will identify existing educational efforts, identify target audiences and develop education programs, develop a handbook summarizing legislation that governs policy on federal land management, and analyze the success of past Coordinated Resource Management Process efforts.

The project coordinators will identify key public land managers responsible for grazing, timber, and mining, to be organized into education task teams. Task team members will develop educational strategies targeting agricultural organizations, business leaders, environmental organizations, political leaders, teachers, youth, and urbanites. Team members will also provide input in the development of a federal land management policy handbook. In addition, the task force will encourage public involvement in public land management and develop a teaching method for youth involved in organizations like 4-H and Ag in Montana Schools. The project leader will provide an evaluation of the educational program at the end of the project.

#### TECHNICAL ASSESSMENT:

While a case can be made for improved public understanding of public lands management, the applicants have failed to establish a need for another education program. Several agencies and organizations already have active programs in natural resource education. Contrary to the opinion of the applicants, public appeals of logging and mining would seem to indicate a public generally well informed on these issues. Most appeals are submitted by members of the public who are informed about current resource management practices and the environmental laws that govern those practices; this fact is supported by the number of appeals upheld and projects modified as a result. The proposal suggested that agencies and organizations with active programs would be identified to avoid duplication; these activities should have been completed prior to application and the proposal should have specified how coordination with existing programs would be accomplished. The role of land and resource management agencies in developing the proposed educational program needs to be clarified and emphasized.

The scope of the program is confusing and, to be successful, needs better definition. Whether it is a youth program, an adult program, or a public media campaign should be determined. Furthermore, the proposed educational program is limited to a discussion of the commercial value of public lands, advocating the exclusive promotion of extractive uses. An accurate representation of the wide spectrum of interests and concerns that play a role in the decision-making process of public land managers, including wildlife and water quality issues, would provide a more objective education project. A good program should describe the situation, provide the facts, and develop the means of delivery.

Finally, the future of the program after the initial development phase needs to be defined; how the program will continue and how it will be updated to provide current information should be known before initial funds are invested.

#### FINANCIAL ASSESSMENT:

The proposed budget estimates the project cost to be \$404,905; grant funds in the amount of \$98,560 are requested. Grant funding would pay for some administrative costs including \$300 for communications, \$1,150 for supplies and \$2,500 for travel; salary costs for a full-time staff technician including \$32,000 for salaries and \$7,360 for benefits; and associated operating costs including \$13,500 for travel, \$600 for communications, \$6,000 for printing, \$150 for supplies, and \$35,000 for video production.

The Montana State University Extension Service indicates it is willing to contribute in-kind services amounting to 75 percent. However, the matching funds are not closely associated with the cost of the project but appear to represent a portion of the normal operating cost. In addition to these costs, \$51,660 in matching funds representing the value of volunteer efforts are included. For consistency in evaluating project costs, DNRC considers only those costs directly associated with a project and the actual expense involved with these costs as match.

Furthermore if the salaries indicated as match were actually exclusively associated with the project, they would be excessive. The budget indicates the equivalent of a full-time professional staff person for 32 months \$133,725, a full-time technical staff person at \$32,000, and a project administrator at \$32,000. The grant project outlined would not justify this kind of staff effort.

ENVIRONMENTAL NOTE:

No direct impacts will result from the implementation of an education program.

RECOMMENDATIONS:

DNRC recommends a grant of up to \$49,280 to pay for 50 percent of the costs outlined in DNRC's portion of the grant budget; the balance of these costs should be obtained through other sources and provided as match. Other costs that are contributed by the agency in support but that are not directly related to the project will not be considered part of the project budget. These should be extracted from the budget proposal and a budget showing the applicant's actual cost out-of-pocket contribution to this project should be developed.

A work plan should be developed after an assessment of existing education efforts is completed to ensure that the grant does not duplicate other efforts. The work plan should represent an education program designed to address the wide spectrum of concerns associated with resource management issues. The grant is contingent on DNRC approval of the project scope of work and budget.

---

Project No.: RRD-36

APPLICANT NAME: Lakeside County Sewer District

PROJECT/ACTIVITY NAME: Lakeside Wastewater Collection & Treatment Facility

AMOUNT REQUESTED: \$ 100,000

OTHER FUNDING SOURCES & AMOUNTS:

TOTAL PROJECT COST: \$ 100,000

PROJECT DESCRIPTION:

The Lakeside County Sewer District is on the west shore of Flathead Lake south of Somers. The district is requesting grant money to pay off part of a loan secured from a local bank which provided funds to complete a wastewater collection and treatment facility. The district indicates that the short-term loan was needed because of a shortfall in money during completion of the project. The system included both a gravity and a low-pressure conveyance system, a treatment system of aerated lagoons, followed by storage and land application



of the treated wastewater. The new system replaced individual septic tank and drainfield systems that served 400 homes and commercial establishments located along the northwestern shore of Flathead Lake.

This project successfully eliminated the public health hazard, documented by well contamination reports, and controlled the nutrient pollution that was contributing to the decline of Flathead Lake water quality. This project also provided for the beneficial reuse of wastewater on agricultural and forested lands for the betterment of the surrounding area.

#### TECHNICAL ASSESSMENT:

An extensive facilities plan was drafted in February 1984 and amended in May 1985. It covered design alternatives, special problems, costs, financing options, local opinion, and numerous other items. The project was constructed in 1987 and 1988, and beneficial service began in 1987.

The Lakeside Wastewater Treatment Facility is in compliance with the EPA requirements and has been approved by the Water Quality Bureau of the Montana Department of Health and Environmental Sciences.

The facilities appear not only technically practical and reliable but also environmentally sound and cost effective.

#### FINANCIAL ASSESSMENT:

The total cost of the constructed project was \$6,177,859. The EPA funded \$4,813,477. The Lakeside County Sewer District provided the remaining \$1,364,382. Two Water Development Program public loans totaling \$1,190,000 were issued by DNRC to the district in 1987 to help meet the district's local cost-share obligation. Both loans carry an interest rate of 6.29 percent for the first 5 years of the repayment period and 8.38 percent for the last 15 years.

The 1987 equivalent user fee was approximately \$34.00 per month. Since January 1990, rates have been increased and district residents are currently facing a \$45.00 per month user fee. The revenue generated by this monthly charge is still far less than the amount required to meet annual debt service requirements for DNRC's loan. Consequently, the district has fallen behind in its repayment of these loans. The district has taken steps to see that the county levies taxes on all property within the district to make up the deficiency. This mechanism is intended to make up deficiencies in future years as well.

The district's difficulty in repaying outstanding loans is in part due to the higher than estimated construction cost (original 1984 total cost was \$3,158,330) and the higher than anticipated ongoing administration and maintenance costs.



ENVIRONMENTAL NOTE:

This project conserves water by beneficial reuse of wastewater through irrigation of agricultural forage and forested lands. It has notably enhanced the environment by eliminating the serious public health hazard created by failed septic tank and drainfield systems and by eliminating a significant source of nutrient pollution into Flathead Lake.

RECOMMENDATIONS:

DNRC recommends no funding for this grant. Program guidelines strongly discourage the use of grant funds to repay loans for existing projects.

---

Project No.: RRD-37

APPLICANT NAME: Montana Bureau of Mines and Geology

PROJECT/ACTIVITY NAME: Water Education Program in Montana

AMOUNT REQUESTED: \$ 95,207

OTHER FUNDING SOURCES AND AMOUNTS: \$ 46,933 - Montana Bureau of Mines and Geology

TOTAL PROJECT COST: \$ 142,120

PROJECT DESCRIPTION:

In response to the growing need for informed communication between state agencies and those involved with and concerned about groundwater and surface water issues, The Montana Bureau of Mines and Geology requests funds to pay for a series of seminars. These seminars will present a concise overview of various aspects of hydrogeologic data collection and provide hands-on experience with water testing equipment, with a thorough discussion of methods, to inform those working closely with the environment and environmental issues. As a result of this project, the public will be able to generate baseline information concerning water in Montana. Topics under consideration are: water quality sampling, water level monitoring, hydrogeology overview, aquifer testing, and monitoring well construction.

A minimum of four seminars will be conducted during the two-year project, with additional assistance and instruction on water quality sampling likely. Several resource conservation districts will serve as the springboard for presenting seminars to various groups in their respective areas. The target districts are Headwaters, Flathead, Musselshell, and Stillwater. Each seminar will emphasize the proper collection of a water sample for analysis, with the analyses performed by the Montana Bureau of Mines and Geology laboratory.

#### TECHNICAL ASSESSMENT:

The proposal does not address any documented problem or issue, does not identify the target audience or benefactors of the program, nor does it identify the length or course content of the seminars. Although the applicants indicated a cooperative approach, it has not documented the cooperative effort. Not all of the resource conservation districts identified as participants have been contacted.

The protection of water quality has become a topic of interest and concern to nearly every citizen of Montana. Protection of water quality at the public level would be the ideal solution. Aside from the professionals involved in water quality issues and assessment, few people have the interest, time, understanding, or need to become highly skilled in water sampling, water testing, or water test interpretation. No evidence is provided that these seminars would be well attended by the public.

#### FINANCIAL ASSESSMENT:

Of the \$95,207 budget outlined, the applicant requests \$69,750 for administration, staff salaries, and fringe benefits; \$6,000 in lab costs for 200 water samples; \$10,757 for travel; \$200 for communications; \$1,000 for printing; and \$7,500 for five water quality sampling sets including four to be left with the resource conservation districts for use by the public.

The proposal indicates that, as an outcome of the seminars, a total of 200 wells will be tested at a total cost of approximately \$100,000. Per sample costs appear to be somewhere in the neighborhood of \$500 each. In comparison, a two-year awareness and education program for private well water users conducted by the Montana State University Extension Service provided testing for 4,000 wells at a cost of \$12,000 in federal funds and \$54,000 in well owner funds (\$16 per sample). This proposal thus appears to be a request for funding to provide salaries, and support laboratory operations, which are purposes secondary to the education of 200 private well owners. The applicants are requesting 3,389 hours in wages for four seminars, and an additional 346 hours in wages to administer the grant.

#### ENVIRONMENTAL NOTE:

No direct environmental impact will result from the implementation of an education program.

#### RECOMMENDATIONS:

DNRC recommends no funding for this application because the proposed effort would duplicate water monitoring and training programs available from other agencies.

Project No.: RRD-38

APPLICANT'S NAME: Town of Flaxville

PROJECT/ACTIVITY NAME: Payment of Previous DNRC Loan

AMOUNT REQUESTED: \$ 39,352.78 - Grant

OTHER FUNDING SOURCES & AMOUNTS: None

TOTAL PROJECT COST: \$ 39,352.78

PROJECT DESCRIPTION:

Flaxville lies 11 miles west of Scobey in northeastern Montana. The town is requesting a \$39,352.78 Grant from DNRC to pay the remaining debt on a loan that the town received in 1985 from DNRC. The original loan provided funds to install a well to supplement the town water supply.

Grant funds would be used to pay-off the outstanding bonds on Flaxville's loan, DNRC Contract Number WDL-85-3018.

TECHNICAL ASSESSMENT:

The Town of Flaxville has had water quality and supply problems for many years. In the past, the town has used relatively shallow wells (50 feet) as its source of water supply. In 1978, a third well was drilled to provide additional water for the system. This well has nitrate concentrations that exceed the state safe drinking water standards.

Since drilling the third well, the town has made other attempts to resolve its water quality problems. To reduce water usage, the town has installed meters in all water service lines and eliminated the flat fee structure. In 1982, the town tried to locate a deep water source by drilling a test well to 450 feet. In 1983, pending results from the 450 foot test well, the town applied for a \$50,000 grant from DNRC to construct the well. An apparently usable source was found at about the 300 foot level. Initial test results indicated that the potential source might be high in iron and manganese and would require treatment. Since the grant application lacked documentation and detail it was not competitive in ranking. Only a \$6,000 grant was recommended; the balance was offered in a loan. These were offered contingent on the outcome of water quality tests in process at the time of application.

Water quality tests were not favorable on the 450 foot test well. Treatment to remove the iron would be required and costly. As an alternative, the town contracted for another test well, this time to 1,144 feet hoping to intersect the "Fox Hills" aquifer at about 900 feet. A source between 500 and 675 feet was located and plans were drawn up to construct a well to tap this source. The Water Quality Bureau of the Department of Health and Environmental



Sciences approved the plans and specifications. Later the quality of water from this well proved to be poor with high levels of tanins and lignins, which are organic contaminants causing a dark coloration and odor in the water. Apparently the well taps an aquifer whose recharge is limited, which in turn reduces the well yield to unacceptably low levels.

In 1985, the town attempted to conduct a pilot plant filtration test to accurately determine treatment plant capacity requirements for a deep well supply. Two attempts to get pilot plant bids were unsuccessful and the deep well concept was abandoned. The town turned to the Montana Bureau of Mines and Geology; a hydro-geological study was conducted in 1987. The bureau recommended that the use of shallow wells was the best on-going solution to the water supply needs of Flaxville, since nitrate treatment would be easier than the specialized treatment required for the deep wells.

In 1989, Flaxville was successful in obtaining a \$236,000 Community Development Block Grant to develop a new shallow well, construct a nitrate removal chlorination treatment facility, and repair a water tower and associated pumps and pipes. Construction for these new facilities is now planned to begin in the near future.

#### FINANCIAL ASSESSMENT:

In 1983 the Town of Flaxville secured a DNRC grant of \$6,000, a DNRC loan of \$44,000, and a Community Development Block Grant of \$21,850 to drill a deep well. As of January 1, 1991, the town will have \$39,352.78 remaining to be paid on their DNRC loan. The town has paid \$19,815.26 on the loan to date.

The average water user (assuming a use rate of 10,000 gallons per month) currently pays \$18.53 per month for water. The operation and maintenance costs associated with the new treatment will increase this monthly cost to \$37.85. If the DNRC grant request is approved for this application, the debt service on the loan would be retired, and the average water user rate would be reduced to approximately \$33 per month.

#### ENVIRONMENT ASSESSMENT:

This project will not have an affect on the environment assuming the proper abandoning of the deep well.

#### RECOMMENDATIONS:

DNRC recommends no funding for this project. Program guidelines strongly discourage the use of grant funds to reimburse the costs of projects already constructed.



Project No.: RRD-39

APPLICANT NAME: Montana State University

PROJECT/ACTIVITY NAME: Testing and Evaluation of the Plastic Lining and Fabrications Process for Solution of Water Development and Renewable Resource Problems

AMOUNT REQUESTED: \$ 62,084

OTHER FUNDING SOURCES AND AMOUNTS: \$ 625,662 - Montana State University, Innovative Process Corporation and chemical companies (unquantified)

TOTAL PROJECT COST: \$ 687,746

PROJECT DESCRIPTION:

The Department of Civil and Agricultural Engineering of Montana State University seeks funding to investigate and evaluate applications of a plastic lining and field fabrication process being developed by Innovative Process Corporation. The fabric and field fabrication process will be investigated and evaluated for application in the lining of landfills and waste disposal areas, lining of leaching/storage sites for mining purposes, lining and rehabilitation of deteriorating pipelines and culverts, lining and rehabilitation of leaking underground storage tanks, and fabrication of pipes and conduits in recycling waste materials.

Interested persons, groups, or agencies would be identified and enlisted to cooperate with Innovative Process Corporation in the placement of the experimental linings, and Montana State University would provide the evaluation of the installed linings.

The 1987 Legislature awarded a \$37,500 grant to Montana State University for the evaluation of a plastic ditch-lining process developed by Innovative Process Corporation. The project is scheduled to be completed by December 31, 1991. Results of the liner and application process are not final, but tentative indications look favorable.

The work to be done under this grant will rely on equipment presently being developed by Innovative Process Corporation. Innovative Process Corporation will also be responsible for the plastics materials and installation of the lining material. A prototype lining machine has been built and used but needs considerable development before the equipment can be used commercially. It is expected that a "refined" machine will be constructed by the time funds for this proposal becomes available.

This particular proposal will concentrate on the evaluation of "in-situ" application of plastic materials for liners, with 10-20 percent of the project, will be devoted to an evaluation of canal liners.

#### TECHNICAL ASSESSMENT:

The need for various lining materials for the purposes listed above is obvious. If the lining process being developed by Innovative Process Corporation proves to be technically feasible and economically viable, the potential for application in irrigation canals, ponds, and landfills and for the rehabilitation of pipes, culverts, and tanks seems great.

The various properties of the plastics materials, such as durability, wastewater resistance, and tensile strength, are generally known and documented. The in-situ lining processes potentially represents a new approach for application of these materials in the field.

Montana State University would provide third-party evaluation of the processes, which may promote a quicker, more credible commercialization of the liners. A great deal of investigation and equipment development by Innovative Process Corporation has yet to be done. It is therefore extremely difficult to predict progress at this time. Montana State University's evaluation is totally dependent upon the corporation's progress and initiative.

#### FINANCIAL ASSESSMENT:

Innovative Process Corporation will be responsible for providing the materials, equipment, and labor for the installation of the various liners. Montana State University will test and evaluate the liners over a two-year period. Of the \$62,084 grant request, \$39,880 is for salaries; \$10,000 for travel, equipment, and supplies; and \$8,690 for professional/technical costs. A 6 percent inflation factor of \$3,514 is included. Montana State University will supply office space, some salaries contribution, lab equipment and supplies, and vehicles. Innovative Process Corporation will supply the necessary materials, equipment, and labor for liner installation.

#### ENVIRONMENTAL NOTE:

No significant environmental impacts are anticipated as a result of this testing and evaluating project. However, should the liner product prove to have commercial application, the environmental benefits could be significant through improved water use efficiencies and prevented seepage and leakage of hazardous materials.

#### RECOMMENDATIONS:

DNRC recommends no funding for this project at this time because it appears that the various liner materials and potential applications are as yet in the research and development stage. Technological problems must be overcome in the equipment needed for the application of the lining material. Research and development by Innovative Process Corporation must include coordination with the various regulatory agencies responsible for leaking storage tanks, landfills, pipelines, and culverts. DNRC feels that involving Montana State University in the evaluation of a private company's product at this point would be premature.

---

Project No.: RRD-40

APPLICANT NAME: Dawson County Conservation District

PROJECT/ACTIVITY NAME: Aquafarm Water Project Feasibility Study

AMOUNT REQUESTED: \$ 30,000

OTHER FUNDING SOURCES AND AMOUNTS: None

TOTAL PROJECT COST: \$ 30,000

PROJECT DESCRIPTION:

The Dawson County Conservation District would like to raise Atlantic Salmon, Walleye, Prawn, and Yellow Perch for the consumer. The fish farm would require 1,000 gallons per minute wells. The district requests funds for a feasibility study to determine the location of aquifers in Dawson County that will provide the needed water supplies. Aquifer information will be used to determine if a proposed, accelerated fish farming and fish product production facility would be feasible in eastern Montana.

TECHNICAL ASSESSMENT:

Adequate information is not provided in the proposal. While the district hopes to locate aquifers adequate for fish farming, no detailed information is given as to how the study will be implemented to fulfill this purpose. No description of methods, standards, and equipment to be used is given. The information provided describes aquafarming, past projects operated by the consulting company, and the qualifications of the consulting company personnel. Conversely, information from the Montana Bureau of Mines and Geology is available; reliable information indicates it is unlikely that aquifers capable of producing 1,000 gallon per minute yields are present in the Glendive area.

Although there is local support for the proposal, not enough information is provided to support its technical feasibility.

FINANCIAL ASSESSMENT:

The budget items for this project are divided into three categories: \$23,900 would be used for salaries, \$3,686 for travel, and \$900 for per diem. These costs total \$28,486 -- \$1,514 short of the \$30,000 requested. No use is indicated for the \$1,514. No other funding sources will be used.

No financial narrative is provided. It is unclear if the study can be done within the proposed budget as it is unclear exactly what is to be done.

ENVIRONMENTAL NOTE:

No direct environmental impact will result from preparing a feasibility study.



#### RECOMMENDATIONS:

DNRC recommends no funding for this project. Inadequate information is provided to determine the proposal's technical or financial feasibility. No description of methods, standards, and equipment to be used is given. No detailed information is given indicating how the project will be implemented.

---

Project No.: RRD-41

APPLICANT NAME: Montana State University, Eastern Montana Agricultural Research Center

PROJECT/ACTIVITY NAME: Movement of Nitrates in Soil and Groundwater Under Conventional Flood Irrigation and Surge Irrigation

AMOUNT REQUESTED: \$ 17,460

OTHER FUNDING SOURCES AND AMOUNTS: \$ 12,400 - Montana Agricultural Experiment Station

TOTAL PROJECT COSTS: \$ 29,860

#### PROJECT DESCRIPTION:

The application of large volumes of irrigation water in combination with high rates of nitrogen fertilizer provides a ready mechanism for leaching of nitrates into the groundwater. The purpose of the project is to document and demonstrate improved nitrogen/water management practices for irrigated crops in Montana to prevent nitrate leaching to groundwater. The applicant also expects to monitor the irrigation efficiency of conventional flood and surge irrigation systems but provided no explanation of a plan and methods.

The Eastern Montana Agricultural Research Center of Montana State University requests grant funds to monitor movement of nitrates through the soil and in the groundwater under agricultural land in the Yellowstone River valley near Sidney. Sites irrigated with conventional flood and surge irrigation systems will be included in the study and will each be evaluated for nitrate movement in both soil and groundwater. Movement of nitrates through soil will be monitored and compared beneath fertilized small grain, sugar beet, and safflower crops. Nitrate concentrations in the groundwater will be monitored for fertilized small grain, sugar beet, and safflower crops. Each crop will be evaluated with respect to the two irrigation systems.

#### TECHNICAL ASSESSMENT:

The 24-month project will take place at the Eastern Montana Agricultural Research Center near Sidney. Three fields, 6 to 10 acres in size, will be sampled for nitrate and fertilized as recommended for small grain, sugar beets, and safflower. The surge irrigation system using the purchased surge valve and grated pipe will be installed for comparison to the existing conventional



irrigation system at the three fields. Groundwater monitoring wells will be placed at the lower and upper ends of each field equally distributed between the conventional and surge irrigation systems within the fields.

Groundwater from all wells, water from the irrigation source, and runoff water will be sampled weekly for nitrate content from time of planting to harvest. Nitrate content will be measured using a Carlo Erba Instruments NA 1500 Nitrogen/Carbon/Sulfur Analyzer. The amount of irrigation water applied to each field and precipitation will be measured. Soil samples from specified depths will be taken monthly from time of planting to harvest and tested for nitrate content to monitor nitrate movement through the soil profile under each irrigation system. The crops will be rotated the second year.

Experts in the soil science and geohydrology field who might have provided reliable direction and credibility to the project were apparently not consulted for input into the project design and implementation. Consequently, the proposed study design, implementation plan, and research methods--particularly for monitoring and comparing nitrate concentration in the groundwater--are inadequate and would generate unreliable results. For example, data may promote unsubstantiated conclusions caused by possible cross contamination between irrigation systems. Poor location of monitoring wells and inadequate methods of identifying and tracing applied nitrates could also contribute to improper conclusions.

#### FINANCIAL ASSESSMENT:

Of the \$17,460 grant requested, \$5,000 would be used for summer labor, \$11,460 for analyses and materials, and \$1,000 for contingency costs. The cost of the surge controller was mistakenly omitted from the original budget request; it will be purchased from the 6 percent contingency amount. The Montana Agricultural Experiment Station will pay \$4,200 for administration costs; \$7,500 for salaries, summer labor, and supplies; and \$700 in contingencies, totaling \$12,400.

#### ENVIRONMENTAL NOTE:

No significant environmental impacts will result from the implementation of the study.

#### RECOMMENDATIONS:

DNRC recommends no funding for this project. The proposed project is regarded as technically infeasible due to the inadequate and flawed study design, implementation plans, and research methods. Resulting data would lead to unsubstantiated conclusions.



## CHAPTER IV

### WATER DEVELOPMENT PRIVATE LOAN PROGRAM

The Private Loan Program is a part of the Water Development Program established in 1981 by the Montana Legislature to promote the beneficial use of water by private entities. These entities may be individuals, partnerships, or corporations. The maximum loan per project is \$200,000. Eligible projects and activities include those which conserve, protect, develop, store, distribute, and enhance water resources through efficient use and management. Eligible projects include but are not limited to erosion control, irrigation dam construction or repair, ditch lining or consolidation, irrigation system automation or rehabilitation, and irrigation system construction.

Applications are accepted at any time, and are reviewed by DNRC for completeness, eligibility, repayment ability, and adequacy of loan security. Each project must include information to determine technical, economic, and financial feasibility. The DNRC director makes the final funding decision.

The Water Development Program authorizes DNRC to issue up to \$10 million in Water Development General Obligation Bonds, and to use the proceeds for loans.

The 1981 Legislature initiated the loan program by designating \$350,000 of Renewable Resource Development funds for loans. In addition to the RRD funds, the following six bond sales provided proceeds for private loans:

<u>Sale Date</u>	<u>Amount</u>	<u>Interest Rate</u>
October 1983	\$1,300,000	7.20%
October 1984	\$ 900,000	8.71%
July 1985	\$1,000,000	7.22%
December 1985	\$1,000,000	6.92%
December 1988	\$ 500,000	9.53%
November 1989	<u>\$ 500,000</u>	9.02%
	\$5,200,000	

As of October 1990, 74 private loans have been approved. A total of \$5,021,157 has been advanced, while \$178,000 is committed to projects but has not yet been disbursed.

The 74 loans fund the following types of projects:

- 58 Sprinkler Irrigation Systems (15 are gravity systems)
- 7 Irrigation Canal Rehabilitation Projects
- 2 Rural Water Supplies
- 1 Streambank Stabilization Project
- 1 Irrigation Canal Weed and Moss Catcher
- 1 Grated Pipe Irrigation Project
- 1 Cablegation Irrigation Project
- 1 Irrigation Water Storage Project
- 2 Hydropower Projects

The canal rehabilitation and canal weed and moss catcher projects affect 27,510 acres. The sprinkler systems, grated pipe, cablegation, and storage projects affect 11,664 acres.



## CHAPTER V

### WATER DEVELOPMENT PROGRAM EMERGENCY GRANT FUNDS

A total of \$125,000 was earmarked as emergency grants for water development projects for the 1990-91 biennium should they be needed.

#### 1990 DNRC Emergency Grant Requests

##### Dupuyer, School District No. 2

On April 9, 1990, the trustees of School District No. 2 requested an emergency grant from DNRC. In November 1989, repairs were made to the school's well. Water samples taken thereafter were unsatisfactory. As a temporary measure the school purchased water from a supplier in Shelby, but a chlorinating system was needed to provide an acceptable on-going water supply.

The school district's budget reserves were reduced by about \$16,000 to pay for the cost of a third teacher and classroom. Any additional reduction would have placed a hardship on the school. Thus, a \$775 grant for the purchase of the chlorinating system was provided.

##### Superior, School District No. 3

On June 1, 1990, Superior School District No. 3 requested funding assistance to help mitigate and minimize the spread of groundwater contamination caused by a leaking underground fuel oil storage tank. At the governor's request, DNRC authorized a \$21,928 grant from the water development emergency account; a like amount was also authorized from the governor's environmental contingency account.



## CHAPTER VI

### DEVELOPMENT AND IMPLEMENTATION OF WATER RESERVATIONS

#### BACKGROUND

Montana's Water Use Act, passed by the 1973 Legislature, gave public entities the unique opportunity to apply to the Board of Natural Resources and Conservation (Board) to reserve water for future beneficial uses or for the protection of a minimum, flow level, or quality of water.

To date the water reservation statute has been exercised solely in the Yellowstone River basin. The Board granted water reservations to 8 municipalities, 14 conservation districts, 4 state agencies, 2 federal agencies, and 1 irrigation district in 1978. Currently, there are water reservation applications pending or being prepared in two other Montana basins, the Missouri and the upper Clark Fork.

#### YELLOWSTONE BASIN WATER RESERVATION PROCEEDING

On December 15, 1978, the Board approved water reservations for present instream flow and future municipal, agricultural, and multipurpose uses in the Yellowstone River basin. The Board specified the following priorities and amounts of water:

- First:                   Municipal reservations - 60,913 acre-feet
- Second:                Instream flow reservations upstream of Billings - 3,914,555 acre-feet, measured at Billings
- Third:                 Irrigation reservations - 655,324 acre-feet
- Fourth:                Instream flow reservations downstream of Billings - 5,429,310 acre-feet measured at Sidney
- Fifth:                 Multipurpose/Storage reservations - 1,111,800 acre-feet

The reservations approved by the Board include 567,261 acre-feet of water per year to 14 conservation districts, primarily for irrigation. To encourage development, the Board established specific requirements to ensure due diligence in the development of these reservations. Each conservation district must prepare a general development plan, a detailed plan for each potential project, and an annual report. The Board is required to review these products at least every 10 years to determine if the objectives of each reservation are being met. It then retains the authority to extend, modify, or revoke a reservation.

#### DNRC Assistance to Conservation Districts

As new reservants, the conservation districts soon realized they were understaffed and unable to comply with the December 15, 1981, deadline for completing the general development plans. In response, the 1979 Legislature amended the reservation statute to require DNRC to provide administrative and technical assistance to the conservation districts. DNRC hired two irrigation

specialists in 1981 to serve as liaisons between the districts and the Board, and to provide direct staff assistance to each conservation district at the local level.

To meet the Board's administrative requirements, the conservation districts requested and obtained an 18-month extension for submitting their general reservation plans to the Board. Subsequent discussions with the Board resulted in two levels of detail for reservation plans. A general reservation development plan, required by July 1, 1983, included information pertinent to reservation development and administration from a general, long-term perspective. A second, more detailed development plan would be required for each project before it could be developed.

The general development plans were drafted by DNRC and approved by the conservation districts before the deadline. Subsequently, these plans were approved by the Board. During this period, DNRC also prepared an evaluation of water availability in the Yellowstone River basin which took into account the eventual development of all reserved water.

After the general development plans were approved by the Board, individuals within the conservation districts could begin applying to the districts to use the reserved water. The districts require individuals to complete and submit applications for each project to the appropriate district. The districts subsequently prepare a detailed development plan which includes the application and pertinent project information. After the detailed development plans are approved by the districts, they are then submitted to the Board for final approval. DNRC assists potential applicants in preparing the detailed irrigation plans and in completing the application forms. DNRC also presents the detailed plans to Board for approval.

#### Use of Reserved Water

As of November 9, 1990, 14 conservation districts had 90 projects authorized by the Board. These projects would use 26,985.6 acre-feet of reserved water per year. Numerous other applications are currently being processed. The following table shows the progress of conservation districts in developing their reserved water.

#### APPROVED USE OF CONSERVATION DISTRICT RESERVED WATER

Conservation District	No. of Projects Approved	Project Water Approved	Reservation Remaining
		<u>Acre-Feet</u>	<u>Acre-Feet</u>
Custer County	12	2,775.6	25,702.4
Dawson County	5	2,554.8	43,300.2
Little Beaver	29	1,255.1	11,517.9



Prairie	6	4,305.0	64,162.0
Powder River	23	7,013.5	6,666.5
Rosebud	7	491.6	86,511.4
Richland County	2	781.0	44,839.0
Treasure County	1	1,500.0	16,861.0
Park	2	1,200.0	62,925.0
Sweet Grass County	4	4,057.0	42,188.0
Stillwater	1	44.0	16,711.0
Carbon	2	318.0	22,358.0
Yellowstone	2	690.0	57,273.0
Big Horn	0	0.0	20,185.0

More reserved water is being put to use in the lower Yellowstone basin than in the upper, which parallels past trends of irrigation development. Much of the reserved water development in the lower basin has occurred in the Powder River drainage. The upper basin has developed less reserved water because of higher development costs and a shorter growing season combined with depressed farm prices.

In spite of the depressed agricultural economy, all 14 conservation districts have been actively promoting the use of their reserved water. DNRC has assisted the districts with a number of public informational and promotional efforts including preparation of newsletters, fact sheets, and brochures. Many districts have held public meetings or presented fair exhibits to spread the word on the availability of reserved water. Six conservation districts in the lower basin have used Renewable Resource Development Program funds to determine the economic feasibility for developing some of the lands for which water was reserved.

The development of irrigation reservations in the Yellowstone River basin is an ongoing process. As required by statute, the Board must review the progress of the districts in developing their reserved water at least once every 10 years. In 1988, the Board began its 10-year review of the Yellowstone River Basin water reservations granted on December 15, 1978. The Board asked each reservant to submit a 10-year reservation report to demonstrate that the objectives of their reservations were being met. The reports were due August 19, 1988, and were reviewed along with DNRC's recommendations at the September 1988 Board meeting. Due to questions raised at this Board meeting, the Board granted conditional approval of DNRC's recommendations for each reservation contingent on possible future action following notice of the review process and comment period.

On November 30, 1988, Yellowstone County requested that the Board issue a declaratory ruling concerning its authority to transfer or reallocate a portion of certain reservations to Yellowstone County. The City of Billings filed an objection to this request and subsequently requested a concurrent review of all water reservations in the Yellowstone River basin. On April 11, 1989, the Board issued a declaratory ruling denying Yellowstone County's request to involuntarily transfer an existing water reservation.

As part of its 10-year review process, the Board continued to discuss water reservation administrative issues, including water reservation transfers and reallocations, during meetings in late 1989 and early 1990. On June 8, 1990, the Board appointed the Ad Hoc Water Reservation Committee, comprised of Board members and DNRC staff, to prepare recommendations on all remaining 10-year review issues. The Board has accepted comments on the Committee recommendations and is expected to take action at its November 1990 meeting.

#### Missouri Basin Water Reservation Proceeding

In 1985, the Montana Legislature directed DNRC to initiate a proceeding to allow for the reservation of water in the Missouri and Little Missouri river basins. The legislature felt that a basinwide system of water reservations would form a strong basis for protecting Montana's share of Missouri River water from downstream states. Water reservations provide an opportunity to set aside water for future diversionary and consumptive uses and also to allocate water to maintain instream flows for the protection of aquatic life, recreation, and water quality.

Due to the vast size of this basin, the Missouri reservation proceeding has been split into two parts. Applications for water in the upper portion of the basin, which encompasses the drainage area above Fort Peck Dam, are being considered first. After an environmental review and contested case hearing, final decisions on the upper basin applications will be made by the Board before July 1, 1992. Applications for water in the basin below Fort Peck Dam and in the Little Missouri and Milk river basins must be submitted by July 1, 1991, and will undergo similar review and hearings. The Board has until December 31, 1993, to act upon these applications.

In the basin above Fort Peck, DNRC received applications for consumptive water uses from 18 conservation districts to provide water for about 220 new irrigation projects; 19 municipalities; and from the U.S. Bureau of Reclamation to draw water from the Missouri to alleviate water shortages in the Milk River basin. Nonconsumptive water uses were applied for by the Department of Fish, Wildlife and Parks for instream flows on about 250 streams to protect fish, wildlife, and recreation resources; the Department of Health and Environmental Sciences for instream flows to protect water quality; and the U.S. Bureau of Land Management for instream flows on 31 headwater streams to protect fisheries and wildlife.

DNRC staff is gathering baseline data and conducting a preliminary analysis of possible impacts of these reservation requests. The draft EIS addressing these applications is scheduled to be published by late spring 1991. Other DNRC activities have included assisting conservation districts in conducting landowner

interest surveys, conducting irrigable land and water availability studies, developing a methodology for preparing conservation district water reservation applications, preparing a study plan to model the hydrology of the entire basin, beginning preliminary environmental studies, and contacting potential applicants in the lower basin.

Two water reservation applications and one water reservation study have already been received from public entities in the basin below Fort Peck Dam. The two conservation districts in Roosevelt County have applied to reserve surface flows for large projects adjacent to the Missouri River, and the Sheridan County Conservation District has applied to reserve groundwater. McCone Conservation District has completed a landowner interest survey and a resource inventory on projects identified through that effort. These applications will not be acted on until all other applications in the lower basin have been received.

#### Clark Fork Basin Water Reservation Applications

In 1987, the Department of Fish, Wildlife and Parks (DFWP) and the Granite Conservation District (GCD) applied for reservations of water in the upper Clark Fork basin. DFWP applied for instream flow reservations in the Clark Fork mainstem above Milltown and in 17 tributaries of the upper Clark Fork. GCD applied for reservations to develop two storage facilities in the Flint Creek drainage.

DNRC is preparing a final EIS on these reservation requests. A contested case hearing is expected to be held in the spring of 1991. Following this hearing, the Board will take final action on the reservation applications.





## CHAPTER VII

### POTENTIAL FEDERALLY AUTHORIZED WATER PROJECTS

#### BACKGROUND

In 1985, the Montana Legislature enacted major water policy legislation that dealt with a diversity of water resource issues. Among them was the need to promote the development of Montana's water resources. The motivation for this interest was founded in the recognition that prudent water development is essential to a productive Montana economy. Equally important, the legislature acknowledged that putting water to wise beneficial use is an important means to establish a legal claim to water. In turn, such claims may be asserted as a legal right that must be recognized and protected in any interstate water apportionment.

In reviewing the state's water development efforts, the legislature noted that a lack of federal funds has severely limited new water project starts. Accordingly, the state must increase its efforts to develop project proposals for which congressional authorizations should be sought. In the interest of promoting needed coordination with the legislature on this matter, the mandate for a biennial report on the state water development program was expanded by the 1985 water policy legislation. More specifically, the statute requires that "the report must identify and rank in order of priority the projects for which the department desires to seek congressional authorization and funding and the efforts the department will undertake in attempting to secure such authorization and funding" (Section 85-1-621, MCA). The following discussion represents DNRC's response to this statutory directive.

#### POTENTIAL FEDERAL PROJECT AUTHORIZATIONS

Issues surrounding the management of Montana's waters have been the focus of long-standing interest and concern across the state. During the past several years, important steps have been taken to better define Montana's water problems and the means to their resolution. The state will continue to direct its resources toward overcoming these concerns, but there are a number of instances where federal funding assistance is needed and appropriate.

Clearly, the resolution of our water problems will require a concerted, long-term effort. At the same time, there are a number of activities warranting near-term action. Those activities, as more fully discussed below include:

1. Tongue River Dam Rehabilitation Project
2. Milk River Water Supply Project
3. Pick-Sloan Power for Existing Irrigation Projects

Although all of these endeavors are crucial to the state, the Tongue River Dam rehabilitation effort represents Montana's highest priority for federal funding. This proposed project will correct a serious dam safety problem, will allow for the resolution of the Northern Cheyenne Tribe reserved water right claims, and will enhance the wildlife and fishery resources of the area.

### Tongue River Dam Rehabilitation Project

The Tongue River Dam, located approximately 10 miles north of the Montana-Wyoming border, is one of 40 water development projects owned by the State of Montana. Constructed in the late 1930s with funding assistance from the Public Works Administration, the project supplies water to local coal companies, a number of small towns, and several thousand acres of irrigated land, including those on the Northern Cheyenne Reservation. The reservoir has also been the focus of considerable recreational use during its 50-year life.

Currently, the Tongue River Dam is unsafe and, even in a moderately large flood, would likely fail. As a high-hazard facility, the potential exists for loss of life and the destruction of considerable property if the dam should overtop and subsequently breach during a large flood. The problem with the dam centers on the spillway and the fact that it was designed to convey a peak inflow of 96,000 cfs. This is about one-fourth the size needed to convey the probable maximum flood (PMF) and an estimated peak inflow of 382,000 cfs. The situation is further compounded by the deteriorating conditions of the spillway. In its present state, the spillway could fail if required to convey discharges of only 13,000 to 16,000 cfs. In view of this situation and attendant high risk to downstream property and lives, the facility is being operated at a reduced level.

Cooperating with the U.S. Bureau of Reclamation and the Northern Cheyenne Tribe, DNRC evaluated various means to overcome the safety problems with the Tongue River Dam. The preferred option, as identified in that feasibility assessment, is to enlarge the spillway to pass the PMF and raise the spillway crest four feet. With an estimated cost of about \$50 million, these actions would ensure that the project conforms with contemporary federal dam safety standards and, at the same time, allows for higher operating pool elevations.

The result of raising the dam would be an increase in the firm annual yield of the project. This, in turn, would provide flows needed to satisfy reserved water rights claimed by the Northern Cheyenne Tribe, without displacing existing uses for irrigation, municipal, and fish and wildlife purposes. Providing for the quantification of the tribe's water rights is an important prerequisite to the utilization of the reservation water resources for the economic benefit of the Northern Cheyenne Tribe.

In developing the dam rehabilitation program, the state has recognized the vital fishery and wildlife resources of the reservoir and related land areas. In turn, steps would be taken to not only mitigate project impacts on these resources, but to provide for their enhancement as well. Key among the enhancement measures being considered is that of improving wetland habitat in the upper end of the reservoir. Possible actions that might be involved are constructing Canadian goose nesting islands and improving the spawning grounds for resident fish species.

As a means to move ahead quickly with the rehabilitation effort, the state is seeking \$300,000 in federal funding during FY 1991 to address a number of key steps in the project implementation process. Such funding, which would be written into the U.S. Bureau of Reclamation budget, would, first of all, lead to the development of a physical model of the proposed spillway. This would confirm the preliminary engineering design and would also serve as a basis for

establishing final costs for the Tongue River project. The second task would involve the preparation of a project planning document. In this report, problems with the Tongue Dam would be carefully delineated, as well as alternative solutions, their implications, and the selected course of action. The third and final task would be to prepare an environmental impact assessment on the selected course of action as required by the National and Montana Environmental Policy acts.

### Milk River Project

Water users in the Milk River Basin face severe water shortages during 4 years of every 10. Causes of the shortages are varied and include a loss of reservoir storage capacity due to sediment build-up, periodic severe droughts, and an aging water distribution system that is unable to carry water needed by current irrigators. In the future, these shortages are expected to increase when tribes on the basin's three reservations exercise their reserved water rights and Canada uses its share of Milk River water as provided by the Boundary Waters Treaty of 1909.

In association with DNRC and the U.S. Bureau of Reclamation, the Milk River irrigators have developed a long-term solution to the water supply problem. Consisting of three phases, the solution first addresses the need to more fully coordinate the management of the basin's scarce water resources. During the second phase, water demand would be reduced by improving water conveyance and on-farm water use efficiencies. The third phase would involve increasing the basin water supply through development of an interbasin water diversion or additional storage.

Water users in the basin have begun to take affirmative action aimed at overcoming the continuing water deficiencies. Cooperating with the basin tribes and other water resource interests, the irrigation districts are looking at ways to improve basin water management and to increase the available supply. Toward that end, the districts have nearly rehabilitated the St. Mary Canal, an interbasin water diversion facility, and are now proceeding with a rehabilitation and betterment program for the project water conveyance system. The Glasgow Irrigation District has received federal loan assistance needed to initiate the rehabilitation effort in the lower basin. Upper and middle basin districts are now seeking state and federal loan-grant assistance for initiating a rehabilitation program in their area. In the near-future they plan to define all the steps needed to secure funding for completing the overall three-phase program, including water development activity aimed at resolving reserved water rights on the three reservations. This latter effort is the object of a basin planning effort under the state water planning program.

### Federal Power for Existing Irrigation Projects

In passing the Flood Control Act of 1944, Congress authorized the Pick-Sloan Missouri Basin Program and set a plan in motion that was aimed at developing nearly one million acres of irrigated land in Montana. The plan included low-cost financing for irrigation projects and established a rate of 2.5 mills per kilowatt hour for irrigation pumping. Only five percent of the land planned for irrigation development in Montana has received the Congressional authorization needed to obtain these benefits. Much of the remaining irrigable



land in the state has been developed without the benefit of federal financing and is currently irrigated using power costing 10 to 20 times more than Pick-Sloan power.

To help finance a variety of water management efforts in Montana and to provide the state with the benefits promised under the 1944 Flood Control Act, the state is seeking the use of Pick-Sloan funds for a variety of purposes. Among them, conservation districts in the lower Yellowstone basin are seeking a Congressional authorization to use low-cost federal power on existing irrigation projects. To accomplish this, conservation districts in Treasure, Rosebud, Custer, Prairie, Dawson, and Richland counties, working as the Lower Yellowstone Conservation District Development Committee, selected three irrigation projects for a pilot effort -- the Hammond Irrigation District, Hathaway, and Heidel Brothers projects.

During the past several years, the Conservation District Committee has been assessing the implications of a Congressional authorization for the use of Pick-Sloan power on the three pilot projects. With the work completed, the group intends to cooperate with the Montana Congressional delegation, public power interests, and DNRC to develop and introduce the necessary authorizing legislation during 1991. If the effort is successful, the state would realize the long-term benefit of price stability for electricity because the federal power could be obtained at a fixed rate. Further, the effort to obtain this Congressional authorization could be used as a basis for developing eligibility criteria for other projects in the Missouri River basin of Montana which may benefit from the Pick-Sloan program.



## CHAPTER VIII

### STATE-OWNED WATER PROJECT REHABILITATION

DNRC administers 25 state-owned water storage projects. Most of the projects were constructed during the mid 1930s and early 1940s by the State Water Conservation Board, DNRC's predecessor, with financial assistance from the federal Public Works Administration (PWA). The PWA projects were "make work" projects intended to provide emergency employment during the depression. In addition, the depression coincided with a serious drought so the PWA water storage and distribution projects were designed to help stabilize Montana's agricultural economy.

DNRC provides maintenance and rehabilitation services for these water projects. Many of the state's water projects have been in operation for about 50 years. In some cases, structural components of the projects are deteriorating simply because of age. In other cases, the design of these projects reflects the standard of the times when the projects were constructed, but does not meet the dam safety standards of today.

Using today's technology and safety criteria, design floods for the projects are typically far in excess of those calculated for the original project. As a result, all but two of the projects were built with spillways that are inadequate by today's standards.

The U.S. Army Corps of Engineers (Corps) Phase I Dam Safety Inspection Program resulted in the inspection of 22 DNRC-administered dams. Twelve of the dams were declared unsafe by the Corps because the spillway capacities were inadequate to meet current dam safety standards. Based on the Corps' findings coupled with subsequent DNRC inspections, feasibility studies are being conducted to identify preferred alternatives so that funding can be pursued for rehabilitating the projects.

The State of Montana is liable for damages resulting from the failure of any state-owned dam and stands to incur tremendous costs in the event of litigation and damage claims. For example, downstream property damage following a breach of Middle Creek Dam (Gallatin County) could be as high as \$30,000,000. Property damage below Tongue River Dam (Big Horn County) would range from \$300,000,000 to \$400,000,000. These figures do not include the potential for loss of life.

As a result of the 1978 flood, the spillway at Tongue River Dam sustained approximately \$1,000,000 in damages and nearly failed, even though it was originally designed to handle a much larger flood. Due to mechanical problems with the outlet works, water again flowed over the spillway at Tongue River Dam in the spring of 1990. Although the dam was never in danger of failing this year, the incident points out the urgent need for rehabilitation at Tongue River Dam as well as other DNRC-administered dams.

Besides ongoing long-term rehabilitation efforts, DNRC has made annual dam safety inspections of all its dams since 1972. As a result of the inspection program, repair and maintenance needs have been identified and plans are being

formulated to complete required repair work. Typical problems found during inspections include erosion of embankments and earthen spillways, corrosion and cavitation of metal components, control gate damage, concrete structure damage and deterioration, drainage problems, and spillway damage. Minor maintenance and repair is usually completed by the water users associations, with DNRC providing technical and field assistance. In many cases, however, deteriorating spillways, outlet works, drains, or embankments require a major, technically complex, and expensive rehabilitation effort. Such repairs are completed under the direction of DNRC and are often financed through the state's Water Development Program. The financial resources are used to support feasibility studies, final design, development of drawings and specifications, and construction activities.

The original purpose of DNRC's water projects was to provide water for irrigation, but many projects are now recognized to provide important recreation and flood control benefits. Local economies derive significant benefits from the projects above and beyond the benefits to the agricultural economy. In addition to providing financing solutions to many dam safety problems, Water Development Program funding serves to maintain the benefits that the state-administered projects provide to local economies.

In addition to project inspection and rehabilitation, DNRC has other duties relating to its storage projects. These duties include investigating the feasibility of developing hydropower capability. In the event that hydropower development is found to be feasible, DNRC would seek to lease the site to public utilities or electric cooperatives. In the case where another entity obtains federal authorization to develop hydropower at a project, DNRC would negotiate a lease with that entity. Where a lease is not possible, DNRC is authorized to construct and operate feasible projects. The goal of hydropower development is to generate revenue that can then be used for project rehabilitation efforts.

DNRC is continuing to develop Emergency Action Plans (EAPs) for its dams. DNRC has developed or is finalizing emergency warning and evacuation plans for the Broadwater Project (Broadwater County), Cooney Dam (Carbon County), Middle Creek Dam (Gallatin County), Painted Rocks Dam (Ravalli County), Petrolia Dam (Petroleum County), Ruby Dam (Madison County), Martinsdale dams (Wheatland/Meagher counties) and Tongue River Dam (Big Horn County). Using these plans will reduce property damage and loss of life in the unlikely event of a dam failure.

DNRC has also begun to prepare operation and maintenance (O&M) plans for its dams. Development of O&M plans will fulfill requirements to obtain operating permits for high-hazard dams as required by the Montana Dam Safety Act. Draft O&M plans have been prepared for Cooney Dam, Middle Creek Dam, and Martinsdale dams. Once the O&M plans and the EAPs have been finalized for each project, DNRC will apply for the operating permits for each dams. All high-hazard dams administered by DNRC are required to have operating permits by July 1, 1995.

The Engineering Bureau has provided dam safety inspections for the Department of Fish, Wildlife and Parks at Lake Inez Dam and for the Montana State Prison at Powell Dam. Repair, maintenance, and rehabilitation recommendations

have been provided to the two agencies. DNRC has also provided project management services for the study, repair, and rehabilitation of Big McNeil Slough, Gartside Dam, and Bear Paw Lake Dam.

#### SPECIFIC REHABILITATION EFFORTS

The following DNRC projects involving dams have had major maintenance or are in the process of being rehabilitated during the 1990-1991 biennium.

##### Bair Dam (Meagher County)

The water users association is continuing to work on repairs based on the annual dam safety inspection recommendations for the dam. The water users hired a contractor to complete concrete repairs to the spillway in 1987. There was inadequate bonding between existing and new concrete and repairs will have to be redone. DNRC engineers and the water users repaired the jet pump at the dam during the spring of 1990. Concrete in the spillway is in very poor condition and will need partial replacement, at a minimum, in the coming years.

##### Cooney Dam (Carbon County)

High water flows in 1987 and 1988 dislodged riprap in the stilling basin below the spillway and damaged the outlet channel. The water users have placed approximately 2,000 cubic yards of new replacement riprap in the spillway stilling basin and along the outlet channel.

##### Flint Creek Project - East Fork of Rock Creek Dam (Granite County)

The water users have been working toward completing a number of the maintenance items identified during the annual dam safety inspections. A contractor was hired in 1989 to perform concrete repairs to the spillway and the outlet.

##### Martinsdale dams (Wheatland/Meagher counties)

An earthen auxiliary spillway was constructed in the right abutment of the south dam to allow the project to route the Probable Maximum Flood. The water users are paying for this work through a loan from DNRC. The addition of this auxiliary spillway to the project means that the two project dams are now in compliance with the Montana Dam Safety Act and current dam safety standards.

##### Middle Creek Dam (Gallatin County)

A feasibility study of Middle Creek Dam was completed in February 1985. The preferred rehabilitation alternative identified in the feasibility study will raise the dam embankment 10 feet and the pool level by 8.2 feet, using reinforced earth and conventional earthfill. An earthen emergency spillway will be constructed in the left abutment. The existing principal spillway will be replaced with two concrete baffled apron drop structures with a channel and dike between each drop structure. Rehabilitation will also include relocation of campground and recreation facilities affected by construction.

DNRC applied to the U.S. Bureau of Reclamation for a Small Reclamation Projects Loan in April 1987 to rehabilitate the project. The loan has been approved by the Bureau of Reclamation and the project was funded by Congress for the 1990 federal fiscal year.



DNRC plans to award a contract for the construction of the Middle Creek Rehabilitation Project by the end of 1990. Construction is expected to begin in the spring of 1991 and be completed in the fall of 1992. The enlarged reservoir will begin filling in the spring of 1993.

One of the key features regarding the rehabilitation of the project involves the mitigation of the lost arctic grayling spawning habitat at the upper end of the reservoir. The existing habitat will be inundated when the reservoir level is increased. The recommended mitigation plan is to divert flows into a dry side-channel upstream of the new reservoir to create the new spawning habitat. A structure to divert flows into the side-channel has been constructed and DNRC has monitored the hydraulic characteristics of the side channel for the last two years. Results of the monitoring indicate that the hydraulic characteristics of the side channel correspond with the requirements prescribed in the arctic grayling mitigation plan.

#### Nevada Creek Dam (Powell County)

The water users association has been working on the maintenance requirements identified during annual dam safety inspections. The spillway is in very poor condition and sections need replacement. The repair work performed by the water users has extended the life of the spillway, but major repairs are still necessary. The water users are planning to hire a contractor to repair the lower portion of the spillway either in the fall of 1990 or the spring of 1991. DNRC will provide technical assistance to complete the repair work.

#### North Fork of the Smith River Dam (Meagher County)

The U. S. Army Corps of Engineers Phase I Inspection Report of April 1981 found several deficiencies with the dam. The main deficiency was inadequate spillway capacity to handle the probable maximum flood without being overtopped, which would result in failure of the dam. Because of this, the Corps classified this high-hazard dam as being unsafe. The inspection report also identified other deficiencies with the dam. DNRC has selected an engineering consultant to conduct a rehabilitation feasibility study to bring the dam up to current dam safety standards.

A detailed hydrologic analysis will be performed to determine the probable maximum precipitation and subsequent flood, route the computed floods, perform a dam breach analysis, conduct a detailed geotechnical investigation, perform an economic analysis of the project, develop a financial plan, develop alternatives for repair and rehabilitation, and present these in a report to DNRC. The hydrologic, geotechnical, archaeological, and toxic materials studies have been completed in draft form. An environmental assessment will also be completed as part of the study. The study was started in May of 1989.

Using the information obtained from the flood hydrology and geotechnical investigation, several alternatives for repairing and rehabilitating the dam will be presented. Some of the possible alternatives are: 1) raising the dam, 2) leaving the dam at its present elevation, 3) adding additional spillway capacity at the present spillway location, 4) replacing the existing spillway and adding an auxiliary spillway at another location, 5) repairing the existing spillway with additional spillway capacity at another location, 6) modifying the outlet controls, and 7) channeling the water flowing over the existing spillway into



North Fork of the Smith River at a new location. No preferred alternative for rehabilitating the dam has yet been chosen. This feasibility study is scheduled for completion next biennium.

#### Painted Rocks Dam (Ravalli County)

DNRC awarded a construction contract in the fall of 1990 to replace the gatehouse and repaint the gate hoisting machinery. The present gatehouse is in very poor condition and is beginning to malfunction. The gate hoisting machinery is corroding, and cleaning and painting are necessary to correct this problem. The contract amount is \$8,900 and work is scheduled to be completed during the fall of 1990.

#### Petrolia Dam (Petroleum County)

A rehabilitation study was completed in 1986 which recommended an alternative to bring the dam up to current dam safety standards. The cost estimate to complete the necessary work includes raising the dam crest by seven feet, replacing the existing spillway, and constructing an auxiliary spillway. No increased reservoir storage will be provided. The rehabilitation of the dam was found to be technically feasible, but not financially feasible.

Because the water users cannot afford the rehabilitation, DNRC is developing a plan to install an early warning system to be used in case of an emergency at the dam. The early warning system will be used in conjunction with the emergency warning plan that is being prepared for the dam. The estimated cost of the early warning system is \$25,000.

The existing spillway is in very poor condition. It is partially undermined and several of the concrete joints are deteriorating. The water users have filled voids under the floor slab from time to time to prevent it from collapsing. They have placed riprap at the toe of the flipbucket to help control erosion. They have also installed drains around the lower gatehouse to help control seepage. These repairs are only short term until major rehabilitation can be performed.

A modified budget request was submitted for \$1,000,000 to complete the design and repairs to the spillway at the dam. The repairs would improve the spillway so that it could safely pass the 100-year flood, which is its present capacity.

#### Tongue River Dam (Big Horn County)

In 1978 the Tongue River flooded, causing \$1 million worth of damage to the Tongue River Dam spillway. Based on the 1980 U.S. Army Corps of Engineers Phase I Inspection Program, the project was declared unsafe primarily because of inadequate spillway capacity to route the Probable Maximum Flood (PMF).

Various water management issues play a role in completing the rehabilitation of the dam. The Reserved Water Rights Compact Commission and the Northern Cheyenne Tribe are currently negotiating a settlement of the tribe's reserved water right on the Tongue River. Resolving this issue is extremely important to building a partnership with the tribe in securing funding for the

project. Key to negotiating a settlement on reserved water rights is the allocation of a portion of the firm yield of the new project to the Northern Cheyenne Tribe.

Other issues that must be addressed in order to gain support for the project include protecting threatened and endangered species and cultural resources, national wetlands initiatives, federal reserved water rights, the Yellowstone Compact, instream flows, meeting the needs of existing water users and recreational users, and state water reservations. Results of modeling studies will be used to address the interaction of these various management issues as they relate to the rehabilitation of the project.

The U.S. Bureau of Reclamation and DNRC recently conducted studies to assist in dam safety decisions regarding spillway modifications to the Tongue River Dam spillway. Findings of the Bureau of Reclamation study are summarized in the December 1989 report entitled "Tongue River Dam Threat to Life Assessment." The report recommends the spillway be repaired to the original design capacity, which differs from earlier approaches calling for a full PMF design. DNRC completed a study analyzing various spillway design floods and presented results in a May 1990 report entitled "Spillway Design Flood Investigations for Tongue River Dam." The conclusions of DNRC's report generally support findings of the Bureau of Reclamation's 1989 report. The conclusion reached by both agencies is based on a rationale that seeks to identify the smallest spillway that will not produce any additional threat to life compared to adopting a larger design flood. DNRC and the bureau are currently refining design to select the spillway design flood and least-cost alternative to rehabilitate the existing unsafe dam.

A Tongue River Dam steering committee was formed and has met monthly since January 1990. The committee is comprised of state and federal officials, tribal representatives, water user groups, and private industry interests. Formation of the committee has helped guide efforts for identifying and resolving issues.

An alternative being discussed by the steering committee is to raise the existing dam four feet to increase the firm yield; rehabilitate the existing spillway to pass a portion of the PMF; rehabilitate the outlet works; identify mine-related mitigation; and develop wetlands enhancement and wildlife and recreation related mitigation areas. This differs from earlier studies that focused on design concepts that included passing the full PMF and raising the dam much higher.

A draft final report entitled "Tongue River Modeling Study" has been submitted by DNRC's contractor. The report summarizes investigations pertaining to water allocation in the Tongue River basin and storable inflows to the Tongue River Reservoir, and simulates the operation of the enlarged Tongue River Reservoir to determine the firm yield of the rehabilitated project under various water use scenarios. The report has been reviewed by the participating entities and comments have been incorporated into the final report.

Discussions have resumed between DNRC and Decker Coal Company to address mine impacts and mitigation. The coal company has contracted with a consultant to evaluate impacts of raising the maximum static reservoir pool by four feet

and to assess the affects of flood routing on the mine property. These efforts are a refinement of previous work and are consistent with the design refinements being conducted by DNRC and the Bureau of Reclamation.

Efforts are underway in the area of environmental mitigation and enhancement. The Montana Department of Fish, Wildlife and Parks (DFWP) has defined a scope of work for waterfowl mitigation as a result of riparian habitat that will likely be lost along the Tongue River above the reservoir due to the proposed four-foot rise of the dam.

DNRC, the Bureau of Reclamation, and the Northern Cheyenne Tribe are currently developing a plan of study for rehabilitating the Tongue River Dam. The study will identify alternatives at the appraisal level that will increase water storage and eliminate the dam safety problem of the present project, settle the reserved water rights claim of the tribe, increase the present project benefits of irrigation and recreation that were reduced by the existing operation of the reservoir, and adequately address the other water management issues identified. A preferred and least-cost alternative would be selected for a feasibility level study which would include feasibility design for all structures. Feasibility level is defined here to be of sufficient scope and detail to meet Bureau of Reclamation feasibility standards as well as sState standards. The study will include an examination of the potential for constructing an outlet for a hydroelectric facility as part of the project. Environmental impact analysis will be conducted to meet the requirements of the National Environmental Policy Act.

The results of the study will be incorporated into a special report in sufficient detail to support the decision-making process of spillway alternatives and reserved water right issues related to the Tongue River Dam in Montana.

New radios were purchased to upgrade the emergency radio warning system. There are now radios in the Sheridan Wyoming Police Station, at the dam, in the Big Horn County Sheriff's vehicle at Decker, and the Rosebud County Deputy Sheriff's vehicle in Birney. The new radios will allow for the initiation of an emergency warning message from a number of locations. As a side benefit, the new radios are providing better communications between the local law enforcement agencies which will aid coordination during an emergency at the project.

#### STATE-OWNED HYDROPOWER PROJECTS

In addition to the state pursuing hydropower development on its own projects, private development is also being investigated. Private interests have expressed a desire to pursue hydropower development at Ruby Dam, Tongue River Dam, Willow Creek Dam, and Painted Rocks Reservoir. FERC preliminary permits were obtained for these projects, but only the Painted Rocks permit remains. Limited negotiations are on-going with the permittee.

#### Broadwater Power Project

The power plant at Toston went on line in July 1989. The Emergency Action Plan has been tested, reviewed, and revised.



## DEPARTMENT OF FISH, WILDLIFE AND PARKS DAMS

### Bear Paw Dam (Hill County)

DNRC is providing engineering management services to DFWP to perform a feasibility study on Bear Paw Dam to upgrade the dam to current dam safety standards and the Montana Dam Safety Act. DNRC is in the process of selecting an engineering consultant to complete the study. The feasibility study will consist of the following areas: flood hydrology, project hydraulics, preliminary design, cost estimates, financial plan, and environmental reports. Once the basic information has been assembled, a rehabilitation plan will be developed and a rehabilitation plan will be recommended to bring the dam into compliance with the current dam safety standards. The rehabilitation study should be completed by the summer of 1992.

### Big McNeil Slough (Phillips County)

Funding for a feasibility study was provided by the Water Development Program to replace the dam on Big McNeil Slough which washed out in 1977. DNRC is providing engineering project management services to DFWP for the study. Thomas, Dean, and Hoskins, Inc. of Great Falls was hired to complete the study. The study evaluated the watershed hydraulics and hydrology, economics, preliminary design, and environmental aspects and developed a construction cost estimate to replace the dam. The final feasibility report will be submitted to DNRC and DFWP in the fall of 1990.

### Gartside Dam (Richland County)

DFWP requested engineering assistance from DNRC to rehabilitate the Gartside Dam Project located near Sidney in Richland County in 1983. DNRC is currently providing project management and engineering expertise to DFWP. As a first step, DNRC developed a feasibility study to generate a preferred alternative to rehabilitate the project to current dam safety standards. An engineering consultant was selected for the feasibility study and the study was completed in 1984. The rehabilitation cost was estimated to be \$500,000.

DFWP requested funding from the legislature in 1985, but the funding was not approved by the legislature until 1987. Before funding for the project was approved, the dam outlet structure failed and the dam was breached in 1985 for safety reasons.

The design specifications and drawings completed in 1984 had to be modified because of the breach of the dam embankment and removal of the old outlet works. Revised construction documents and drawings were developed to include the replacement of the embankment fill and the outlet works and installation of a revetment mattress for spillway outlet erosion control. The construction contract was awarded in July 1990 and construction is to be completed by December 1990.

Filling the reservoir again will raise the water table in fields immediately upstream of the project. To mitigate this situation, DFWP reached an agreement with the landowner to put in an agricultural drain system. A construction contract was awarded and the project will be completed during the 1990-1991 winter when the ground freezes. Additional project costs to DFWP amount to \$25,000 to install the agricultural drain system.



## CHAPTER IX

### SUMMARY OF PROJECTS PREVIOUSLY FUNDED BY THE WATER DEVELOPMENT AND RENEWABLE RESOURCE DEVELOPMENT PROGRAMS

#### A. Water Development Projects Considered for Grant Funding by the 1983, 1985, 1987, and 1989 Montana Legislatures

A total of 238 grant applications have been considered for funding during the 1983, 1985, 1987, and 1989 Legislative sessions. The following water projects were approved for funding by the 1989 Legislature through H.B. 775:

1. Daly Ditches Irrigation District was approved for a \$100,000 grant to replace the Republican West Irrigation Diversion in the Bitterroot River. Because of a lack of the district's commitment for additional necessary finances, the grant was not accepted.
2. Montana Rural Water Systems, Inc. was awarded a grant of \$60,000 to continue funding for its water system technical advisor. A grant agreement will be written in early 1991 as grant funds are needed.
3. Beaverhead and Mile High conservation districts were awarded a grant of \$18,400 for a channel stabilization project on the Big Hole River. Final project design has been completed with construction scheduled in early 1991.
4. Prairie County Conservation District was awarded a \$65,000 grant to participate with Custer and Powder River conservation districts in a project to demonstrate improved irrigation management practices in several small watersheds along the Powder River. Demonstration sites have been selected and instrumented so that the project can begin in earnest in the spring of 1991.
5. Carbon Conservation District was awarded a \$100,000 grant for an erosion control project on Rushmore Creek, a tributary to the Clarks Fork Yellowstone River. An irrigation water management plan has been developed and is in the process of being implemented by the Mutual and Bridger Ditches water users. No grant agreement has yet been written. Pending approval of plans and costs estimates from the Soil Conservation Service, it is anticipated the grant agreement will be written in early 1991.
6. Eastgate Village Water and Sewer Association was awarded a \$25,000 grant for installation of a pivot irrigation system for use of wastewater pond effluent. Construction has begun with a completion date in the fall of 1990.

7. Carbon Conservation District was awarded a \$30,000 grant for cost-sharing of court-ordered measuring devices to be installed within the Rock Creek drainage. To date, a total of \$3,454.33 has been expended for cost-sharing of the installation of 10 irrigation water measuring devices.
8. Huntley Irrigation District was awarded a \$44,268 grant for the installation of main canal flow control and measuring devices. A grant agreement will be written when anticipated grant funds become available in the spring of 1991.
9. Dutton was awarded a \$24,500 grant to stabilize the Teton River to protect its water source. The town is presently seeking additional funding which would allow the town to construct increased water storage facilities and generally upgrade its overall system. It is anticipated construction and stabilization of the stream bank will begin in the spring of 1991.
10. Poplar was awarded a grant of \$30,000 to construct a water treatment facility. A grant agreement will be written when grant funds become available.
11. Park Conservation District was awarded \$30,000 to construct sediment diversion vanes at the mouth of the Park Branch Canal on the Yellowstone River. A grant agreement has been written with construction scheduled for the fall of 1990.
12. Sheridan County was awarded a grant of \$84,500 to conduct a feasibility study for construction of Carroll Dam. A grant agreement will be written when grant funds become available.

**B. Projects Approved for Coal Severance Tax Loans by the 1983, 1985, 1987 and 1989 Montana Legislatures**

In the 1983, 1985, 1987, and 1989 legislative sessions, there were 79 applications for Water Development Program loans over \$200,000. Municipal water projects make up the greatest percentage of project types; cities and water districts were the most common applicants. The following projects were approved by the 51st Legislature to receive coal severance tax loans; loans were issued during the 1990-1991 biennium:

1. The unincorporated community of Noxon was approved for a \$222,550 loan by House Bill 778. Noxon received a \$151,000 loan at an interest rate of 4.9 percent for the first 5 years, and 6.9 percent for the remaining 15 years of a 20-year term. The loan was used to finance the installation of a new 150,000 gallon water storage tank, fire hydrants, new residential services and meters, and to make necessary improvements to the 60-year old water system.

2. Sun Prairie Village Water and Sewer District received a loan of \$585,014 at a 4.9 percent interest rate for 5 years, and 6.9 percent for the remaining 15 years of a 20-year term. The loan financed improvements to the district's wastewater system.
3. The town of Fairview received a loan of \$258,250 at an interest rate of 6.23 percent for the first 5 years, and 7.23 percent for the remaining 15 years of a 20-year term. The loan financed a treatment facility necessary to reduce iron and magnesium levels to meet acceptable standards.
4. Miles City received a \$1,532,910 loan at an interest rate of 5.9 percent for the first 5 years and at 6.9 percent for the remaining 15 years of a 20-year term loan. The loan financed the replacement of the existing pre-sedimentation basin at the city water treatment plant.
5. Gardiner-Park County Water District received a loan of \$360,500 at an interest rate of 5.9 percent for 5 years and at 6.9 percent for the remaining 15 years of a 20-year term. The loan provided funds to improve water pressure in the Jardine pressure zone by increasing the distribution system capacity and construction a 200,000 steel tank at a higher elevation.

The following projects were approved for loan financing by the 1989 Legislature, but project sponsors have not yet requested their funds:

6.	East Bench Irrigation District	\$ 431,000
7.	Lake County/Big Arm Sewer District	2,283,893
8.	Somers County Water and Sewer District	3,151,960
9.	City of Bozeman	386,893
10.	City of Glendive	4,075,000
11.	City of Whitefish	6,035,800
12.	Town of Wibaux	250,000
13.	Anaconda/Deerlodge County	500,000
14.	City of Browning	447,014

The following loans were approved in previous legislative sessions; funding was reauthorized in 1989:

Town of Dutton	\$ 150,000
Evergreen Water and Sewer District	3,226,900
Town of East Glacier	484,270
Pondera Conservation District	750,000

C. Renewable Resource Development Program - Projects Considered for Grant Funding by the 1983, 1985, 1987, and 1989 Montana Legislatures

The 1983, 1985, 1987, and 1989 legislatures considered a total of 84 grant applications for projects under the Renewable Resource Development Program. State agencies have submitted the largest number of applications, and most project applications received have been for the agricultural land improvement category. The following projects were approved for funding by the 1989 legislature through H.B. 775:

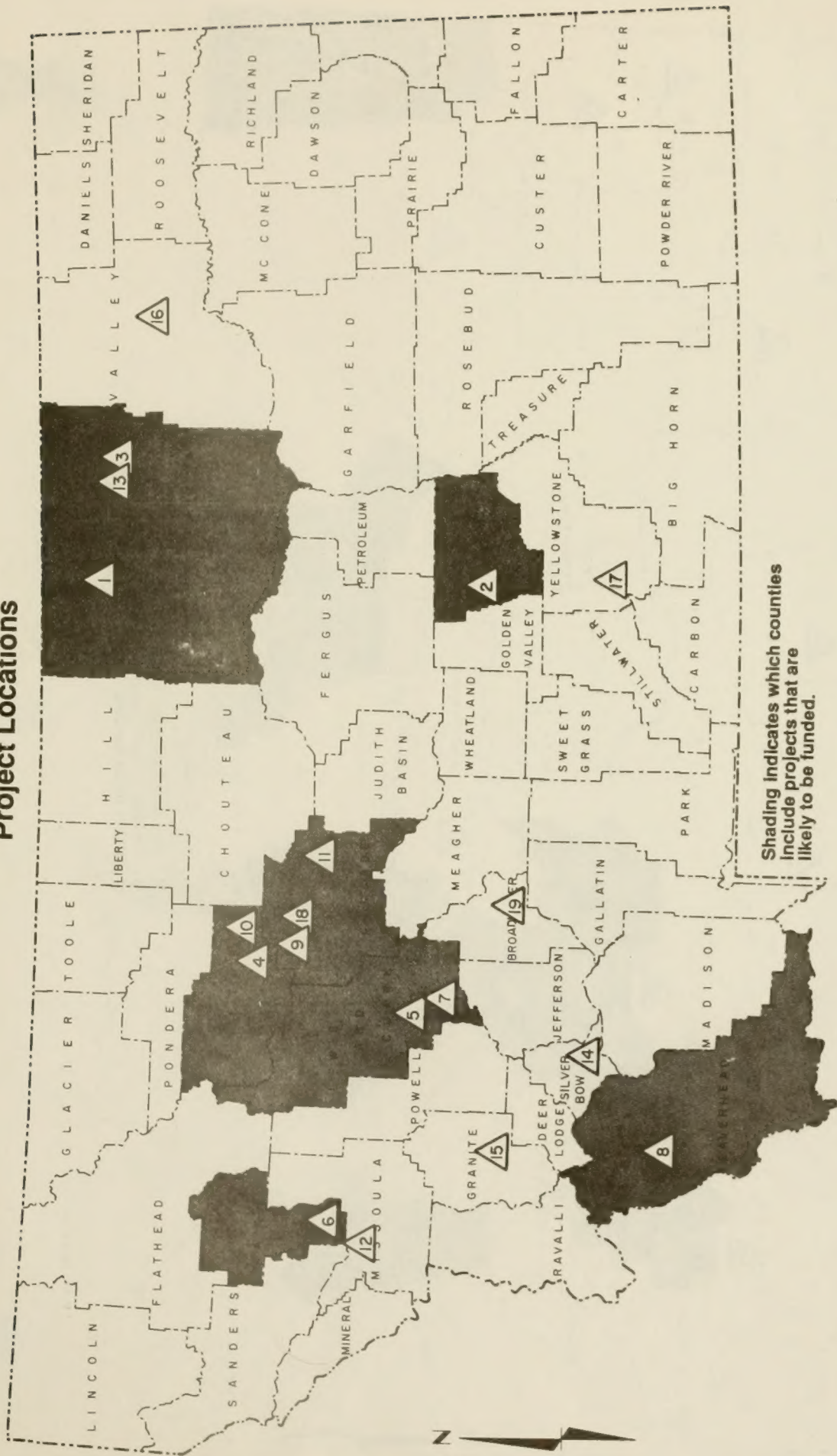
1. Gallatin Conservation District was awarded \$100,000 to rehabilitate the old Bozeman landfill site into the East Gallatin State Recreation area. A substantial portion of the area has been cleaned up and topsoiled. Completion of the project is scheduled for June 1991.
2. Flathead Basin Commission was awarded a \$25,000 grant to fund a lake core sediment collection and analysis study. Completion of this portion of the Flathead Basin forest practices/water quality cooperative program is scheduled for June 1991.
3. Montana State Library was awarded a \$99,806 grant for support of the Natural Resource Information System program. The funding period will continue through September 1991.
4. Montana State Library was awarded a \$45,510 grant for support of the Montana Water Information System program. Funding will continue through September 1991.
5. Montana State Library was awarded a \$99,450 grant to support the Montana Natural Heritage program. Funding will continue through September 1991.
6. University of Montana was awarded a \$41,773 grant to continue development of management guidelines for riparian areas in the state. Funding for the project will continue through June 1992.
7. Montana Department of Agriculture was awarded a grant of \$93,550 to establish a long-term statewide groundwater monitoring network to assess the presence of agricultural chemicals and pesticides. The monitoring wells will be installed in late 1990. Funding is scheduled to continue through March 1992.
8. Lewis and Clark County has received a grant of \$100,000 to conduct an extensive hydrogeologic evaluation of the Helena valley area. The primary purpose of the project is to characterize the aquifer so that a groundwater protection management plan can be developed. Grant funding for the project will continue through June 1991.



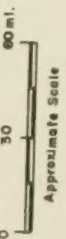
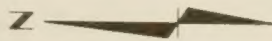
9. Belgrade was awarded a grant of \$50,000 for water main replacement and installation of water meters. The water main was replaced with the grant funds fully disbursed as of September 1990. Belgrade was also authorized for a loan of \$150,000 which will be used to complete the project.
10. Hysham was awarded a \$50,000 grant to be used for improvements to its water system. A grant agreement has not yet been written with Hysham.
11. Whitefish County Water and Sewer District was awarded a grant of \$73,440 to demonstrate several streambank and erosion control techniques along Swift Creek. Much of the construction work will be completed by late 1990. The project, which allows for monitoring and evaluation of the stabilization practices, is scheduled to continue through October 1994.
12. East Glacier Water and Sewer District was awarded a grant of \$40,000 for construction of a sediment diversion on its Midvale Creek Reservoir. A grant agreement will be written as grant funds become available.
13. Yellowstone County was awarded a \$10,000 grant to conduct a feasibility study of site selection and construction of a flat-water recreation reservoir near Billings. A grant agreement will be written when grant funds become available.
14. The Montana Department of State Lands was awarded a grant of \$89,121 to develop a pilot integrated resource information system for management of the state's solar trust forested lands. A grant agreement will be written when grant funds become available.
15. Columbia Falls was awarded a \$20,000 grant to conduct a city water system master plan. The master plan was completed in June 1990.
16. Missoula County was awarded a \$45,000 grant to purchase the necessary equipment and provide training to respond to potential groundwater pollution threats. A grant agreement will be written when grant funds become available.
17. Montana State University was awarded a grant of \$10,700 to allow its Eastern Agricultural Research Center to study the movement of nitrates into groundwater under agricultural lands. A grant agreement has been written but no funds disbursed pending availability of grant funds.
18. Montana Department of Natural Resources was awarded a \$32,000 grant to be used for the water reservation program. A grant agreement will be written when grant funds become available.

19. Green Mountain Conservation District was awarded a grant of \$18,720 to be used for the installation of fire hydrants in the town of Trout Creek. A grant agreement will be written when grant funds become available.
20. Lakeside Water District was awarded a \$20,500 grant to upgrade its water delivery system. A grant agreement will be written when grant funds become available.
21. The Montana Department of State Lands was awarded a grant of \$60,000 to initiate a pilot urban forestry program in several communities in southwestern Montana. A grant agreement will be written when grant funds become available.

# Water Development Program Grants and Small Loans Project Locations

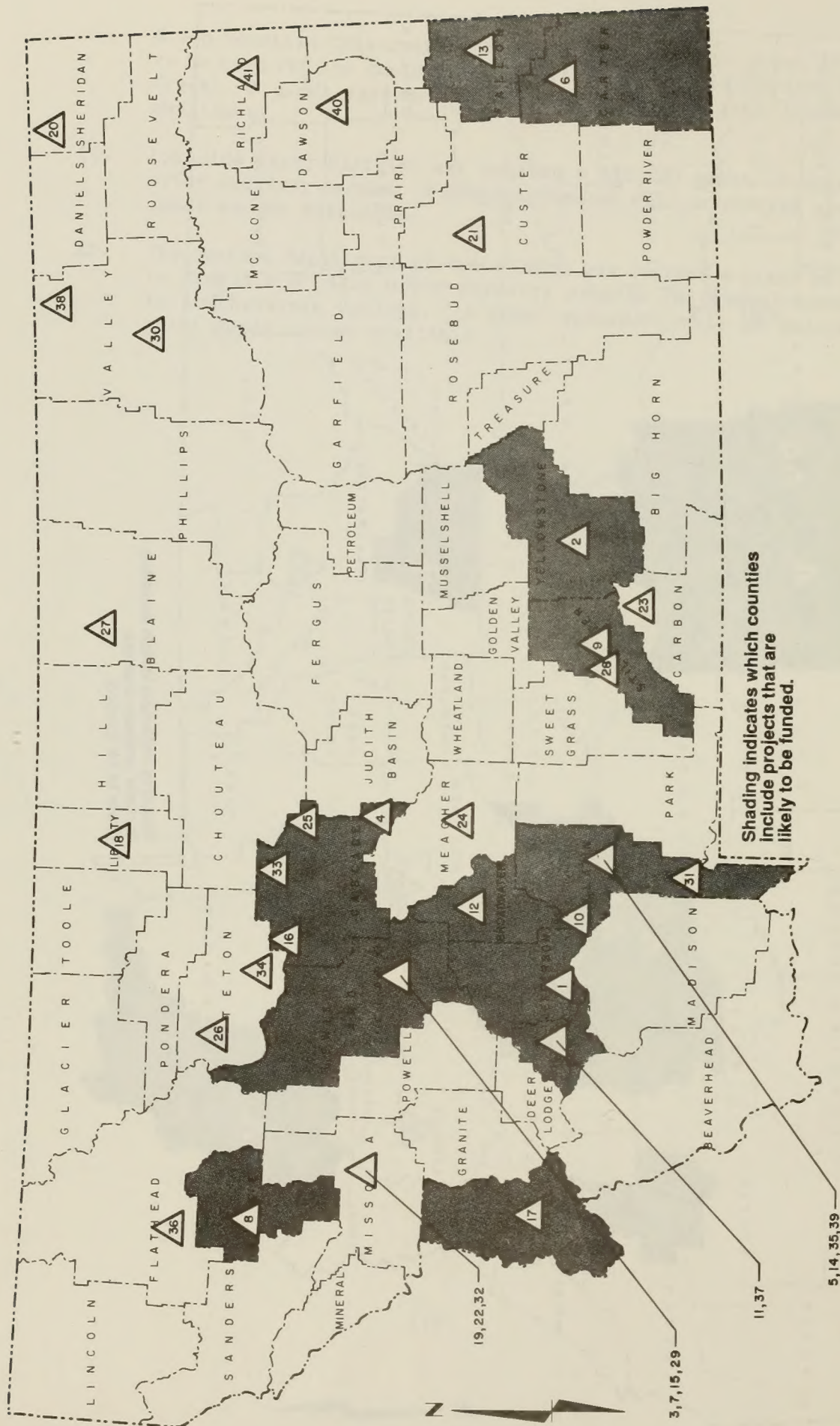


Shading indicates which counties include projects that are likely to be funded.

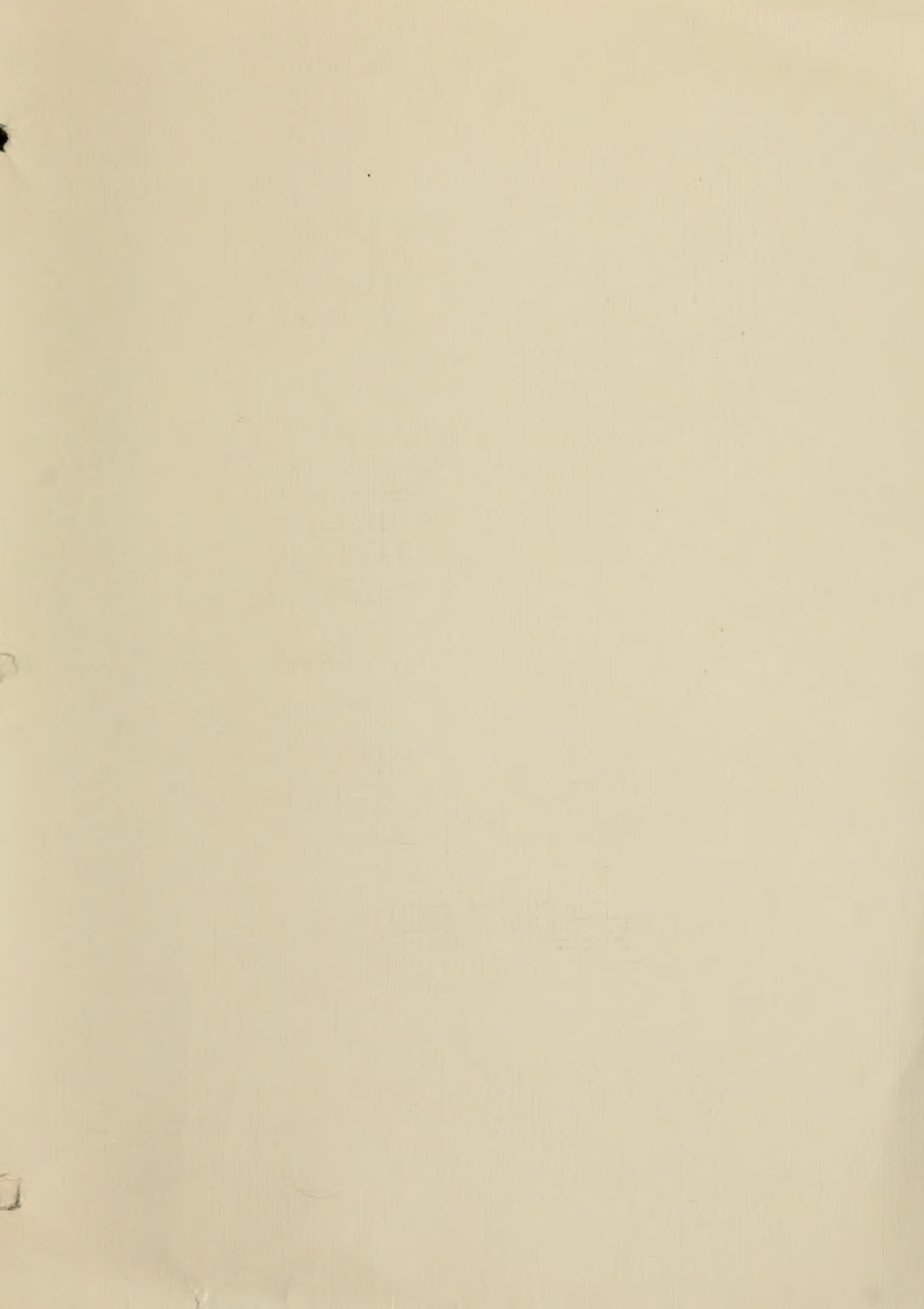


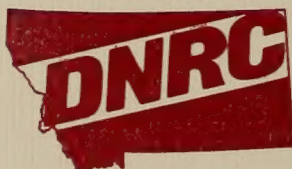


# Renewable Resource Development Program Project Locations









Resource Development Bureau  
Montana Department of Natural  
Resources and Conservation  
1520 East Sixth  
Helena, MT 59620-2301